

Exploring Grape Varietals for Nashik Terroir

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Abstract: *Wine is an alcoholic beverage made from fermented freshly gathered grapes. Nashik, located in the state of Maharashtra of India, has gained recognition as a promising terroir for wine production. The grape varieties grown in the Nashik valley are Chenin Blanc, Sauvignon Blanc, Zinfandel, Cabernet Sauvignon, Shiraz, Chardonnay, Merlot, Riesling, Viognier, Tempranillo, Malbec, and Grenache. This research paper investigates the suitability of various grape varietals for Nashik's unique terroir, taking into account climate, and soil characteristics. The study provides insights into optimal grape varietals to enhance wine production in this burgeoning region. Nashik can benefit from similar systematic study to streamline grape variety selection, reducing costs and enhancing the regions winemaking competitiveness. Researcher has gathered information for the research topic using Interview method in person and also by Google forms.*

Keywords: Nashik, terroir, grape varietals, wine production, viticulture, climate, soil, Indian wine industry.

I. INTRODUCTION

Wine is an alcoholic beverage produced through the fermentation of freshly gathered crushed grapes. This natural process converts sugars into alcohol, resulting in a wide range of flavours and characteristics. Wine comes in various types, including red, white, and rosé, each with its own unique taste and qualities.

India is emerging as a notable wine-producing region, with vineyards in states like Maharashtra, and Karnataka. The country is known for its unique grape varietals and offers a diverse range of wines, including red, white, a sparkling, with an expanding presence in both the domestic and international markets.

The Nashik region boasts a notable soil diversity, a crucial factor contributing to the distinctive qualities of its wines. Within this region, an array of soil types, such as clay, loam, and sandy soils are present. This rich variety equips winemakers with a versatile selection for cultivating diverse grape varietals. Clay soils exhibit a remarkable capacity to retain moisture, thereby guaranteeing a consistent and reliable water source for grapevines. In contrast, sandy soils excel in providing effective drainage. The intricate interplay between these soil types imparts unique flavours and textures to the wines originating from the Nashik Terroir.

The grape varietal selection is critical and a fundamental aspect of wine production, influencing the final taste, quality and characteristics of wine. Grape types offer unique flavours, from fruity to earthy, shaping a wine's taste and aroma. Grapes interact with the vineyard's terroir, reflecting its soil, climate and geography. Picking grapes suited to local climates ensures robust vines and ripened fruits. Certain grapes resist diseases, reducing the need for chemicals and supporting sustainability. Winemakers craft varied styles by selecting grape types, catering to diverse tastes. Consumer preferences drive grape choices, impacting commercial success. Mixing grape variety enriches wine complexity and structure. Grape heritage connects wine regions with cultural identity. Exploring new grapes fuels wine making creativity and unique styles. Consistent grape choices build brand reputation meeting consumer expectations. In essence, grape varietal selection is a vital, multifaceted decision, fusing science, art, and tradition to create wines appealing to both palates and markets. It stands as a cornerstone to the wine making process.

The researcher wants to understand which grape varietals thrive well on Nashik terroir through this study. This study will help understand the varietals which find the Nashik terroir cozy for growth. The study holds significant potential in the context of Nashik's wine making industry. Currently, wineries in Nashik undergo costly and time-consuming experiments when introducing new grape varieties. Nashik, although renowned for producing quality wines, lags behind countries like France and Germany which have centuries of wine production experience. These countries have invested considerable time and effort in identifying grape varieties that thrive in their regions. Nashik can benefit from

similar systematic study to streamline grape variety section, reducing costs and enhancing the regions winemaking competitiveness.

Objective of the study:

To explore which grape varietal grows well on Nashik terroir.

About Nashik

Terroir and Nashik:

Nashik, nestled in the picturesque western state of Maharashtra, stands as India’s foremost wine region, enchanting wine enthusiasts with its captivating terroir. Terroir refers to the unique combination of environmental factors that influence the characteristics of agricultural products, particularly wine, coffee, and certain foods. These factors include the soil composition, climate, topography, and the specific cultural and human practices associated with a particular region. Terroir imparts distinctive flavours, aromas and qualities to wine.

With its distinctive, geographical attributes and favourable climate, Nashik provides an ideal environment for vineyards, giving rise to some of India’s most exceptional vines let’s delve into the intriguing terror of Nashik, and uncover the secrets behind its vine achievement.

Geography and climate

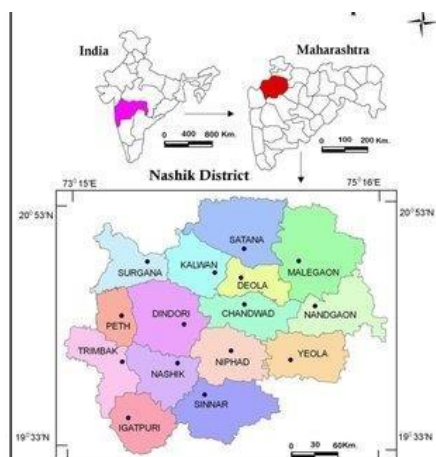
Situated at an elevation of 700 m above, sea level, Nashik, boasts, diverse topography that significantly influences its terroir. The region is flagged by the Sahyadri mountain range, acting as a natural shield against excessive rainfall and ensuring excellent drainage in vineyards. Furthermore, the Godavari River and its tributaries nourish Nashik’s fertile soils with essential minerals. Nashik enjoys a moderate climate characterized by warm days and cool nights creating optimal conditions for grape cultivation.

Soil composition

The soils of Nashik display impressive diversity contributing to the distinctiveness of its vines within the region one encounters of variety of soil types, including clay, loam, and soil. This soil variations provide wine makers with a diverse converse for cultivating various grape varietals. Clay soils, retain moisture, ensuring a consistent water supply to the vines while sandy soil facilitate excellent drainage. The interplay of these soils, impart unique flavors and textures to the wines originating from Nashik.

Grape varietals

Nashik offers an exceptional environment for growing both white and red grape varietals. In white grape varieties, such as souvenir blonde, Shannon blow, and Chardonnay thrive in the region, for their crisp and tropical fruit notes. Among the red grape vitals cabinets, souvenir, Shiraz and Merlot flourish display rich flavors, velvety, textures and intricate aromas. Grapes cultivated in Nashik vineyards developed the distinct character eloquently expressing the essence of the regions terroir.



Source: Pagar, Sanjay. (2014). Development and problems of wineries in Nashik District, Maharashtra. International Research Journal of Humanities, Engineering & Pharmaceutical Sciences.

II. REVIEW OF LITERATURE

Rui Wang, 2015, Soil types in Helan Mountain, Ningxia, significantly affect grape and wine composition. Potassium and Calcium-rich soils enhance sugar and aromatic compounds in grapes. Permeable soils lead to higher photosynthesis and sugar levels. Researchers studied Aeolian, Sierozem, and irrigation silting soils' impact on Cabernet Sauvignon grapes and found Aeolian and Sierozem soils yielded better grapes for wine production.

Bhat, 2017, Soil significantly impacts crop characteristics, including wine, as seen in Chablis' flinty notes from unique Portlandian and Kimmeridgian soil. Researchers are studying soil nutrients in Jammu and Kashmir's grape orchards. A survey of 15 orchards in Ganderbal revealed moderate nitrogen and phosphorus levels. All sites had high magnesium, potassium, calcium, iron, manganese, zinc, and moderate copper, boron, and molybdenum content in the soil.

Orduña, 2010, Climate change profoundly affects grape cultivation and winemaking. It leads to earlier harvests, rising temperatures, elevated grape sugar, reduced acidity, and altered aromas. High temperatures hinder wine metabolism and yeast activity, resulting in acetic acid by-products. Elevated pH disrupts microbial balance, risking spoilage. Adapting to these changes is vital for wine quality, as increasing temperatures pose a significant threat. High-quality grapes are essential for exceptional wines.

III. METHODOLOGY

The researcher conducted interviews, face-to-face to gather data. Interviews allowed respondents to share their perspectives, insights, and knowledge on topics related to yields, grape ripening, favourite grape varieties, and future grape varieties under consideration.

Questionnaires, designed using Google Forms and comprising multiple-choice questions, were used as a data collection method. These questionnaires were distributed to respondents via phone numbers.

Statement of the Problem: The study focuses on identifying grape varieties that thrive in Nashik's terroir, a region known for grape cultivation and wine production. Despite numerous studies on factors influencing wine quality, there is a gap in understanding which grape varieties perform best in Nashik.

Objectives: The primary objective is to determine which grape variety suits Nashik's terroir.

Need and Scope: This research addresses the need to identify grape varieties suitable for Nashik, reducing the cost and time associated with experimentation. It can benefit wineries, boost the wine industry, and reach a wider consumer base. Continuous studies are essential to develop Nashik's wine industry further.

Target Population and Accessible Population: The target population comprises winemakers, winery owners, and consulting winemakers in Nashik.

Sample Size: A sample size of 10 respondents was chosen from specific wineries for this study.

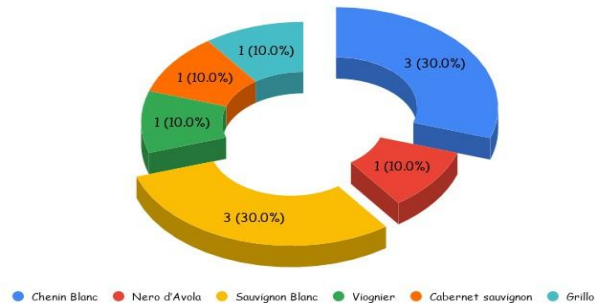
Reliability of Data:

The researcher ensured data reliability by personally visiting wineries to collect data and sending questionnaires directly to respondents. This approach assures that the data is collected from its sources and is both accurate and reliable. Replicating the analysis with the same methodology should yield identical results, enhancing the research's reliability.

IV. DATA ANALYSIS

It is found that in white grape variety which gives maximum yield in Nashik terroir is Chenin Blanc. All 10 respondents believe Chenin Blanc gives maximum yield. It is found that in red grape variety which gives maximum yield in Nashik terroir, out of 10 respondents 9 believe it's Shiraz while 1 respondent believes it's Zinfandel who gives maximum yield. It is found that the favourite grape variety of the respondent which grew in Nashik terroir out of 10 respondents 3 respondents' favourite grape is Chenin blanc, 1 respondent's favourite grape is Nero d' Avola, other 3 respondents' favourite grape is Sauvignon blanc, other 1 respondent's favourite grape is Viognier, other 1 respondent's favourite grape is Cabernet Sauvignon and while other 1 respondent's favourite grape is Grillo is the favourite grape variety which grew in Nashik terroir.

Count of Which is your favourite varietal grown in Nashik terroir?



V. CONCLUSION

In this research, data was collected from 10 respondents representing various wineries in the Nashik region. The respondents, consisting of winemakers, winery owners, and others, provided valuable insights into grape varieties. Notably, all 10 respondents unanimously agreed that Chenin Blanc is the grape variety that delivers the highest yields. Additionally, the majority (9 out of 10) believed that Shiraz is the primary contributor to high yields, while a single respondent expressed a preference for Zinfandel in this regard. This data analysis sheds light on the consensus and preferences within the local winemaking community regarding grape varieties and their yield potential in Nashik.

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