

“Viticulture and Vinification” Two Fundamentals in Promotion of Wine Tourism In India

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Abstract: - With world economy struggling in its way and looking for alternative options, India's wine tourism is poised to achieve a great boost if right direction and promotion are given. Even though wine production has a long history in India, there has not been much of growth in this Industry for a long time until recently, where some results are surfacing.

This paper explores tourism opportunities in promoting viticulture and vinification as a tool for development of wine tourism which in return has a wider capacity and capability to bring economic growth and employment in the current scenario. The irony today is that we do not promote vinification (production of wine from grapes) instead we promote import of wine from different parts of the world. Whereas we have physiological diversity that suits the flourishing of viticulture at home grounds. Promotion of wine tourism in India will have a long term benefits in terms of economic growth, job potential and international recognition as a 'wine producing country'

With world looking at India, there are many job openings that can flourish Indian job market. Many foreign companies are either already existing or eager to enter Indian market. We have large numbers of emerging domestic market in metro cities and international clients. To cater these potential customers we are in dire need of quality professionals for current and future job market in Hospitality Industry. With the promotion of wine tourism, F & B service professionals with right skills are needed to deliver required service. In the current scenario where people have started to use spare money and time, there is a wide scope of introduction of wine as a drink with food in general masses. As we have burgeoning middle class with spare money and time, there is big market to cater at home front.

The process of preparation, production, storing and service of wines itself involves lots of employment opportunities and economic potential. With cheap labour in India we can do lot more than developed countries of west and give good competition in quality and price for the production and preparation of quality wines. India can certainly be favourite outsourced destination for production of quality grapes for wine production and even become producers of finest wines.

As vinification requires professionals to prepare wine hence promoting vinification will enhance many outlets for source of wine as a drink along with dinner, rather than spirits. Once the difference of spirits and wine is established, we will see a lot of demand for wines.

Hence viticulture & vinification can bring International recognition to Indian wines and due to cheap labour India will see a boom in wine tourism. At the same time we will require enormous amount of professionals to cater to these

needs thereby providing jobs to locals and improving economy.

Key Terms: *Employment opportunities, table grapes, quality production, viticulture, vinification*

I. INTRODUCTION

“Wine Tourism,” is elucidated as Tourist activity involving visitation to wineries, procuring firsthand experience of wine production, including grape cultivation and wine making process. This encompasses series of steps that create an inquisitive atmosphere among visitors during their visitation and / or stay at vineyards. The process of wine making involves harvesting & processing of wine grapes, fermenting of grape juices and ultimately packing into bottles. The numerous steps involved in these two processes attract customers in great deal which lead to wine tourism. Wine Tourism is defined as “visitation to vineyards, wineries, wine festivals and wine shows for which grape wine tasting and /or experiencing the attributes of a grape wine region are the prime motivating factors for visitation”.(11). As wine tourism involves visitation to vineyards, attracting the tourist into wine tasting which contains alcohol, engages them into socializing and relaxation activities (1),(6),(12). Wine tourism has done remarkably well in most of the wine producing countries of world. It has been characterized with employment of local population along with utilization of land in natural ways. It is gaining popularity by involving tourists into wine tasting, consumption or purchase of wine, visits to wineries & vineyards, wine tours and wine festivals. Tourists are also involved in special wine-related events like knowledge about the variety of grapes, their location, farming methods, ageing, corking, fermentation, etc., that is combined to lend wines their unique taste and appeal.

Wine tourism, usually sold as rural paradise, includes leisure cuisine, scenery & out door activities, can have a great impact on the potential of wine tourism destinations (4). The process of wooing tourists works quite profitable to wineries in two ways. One, they earn through sale of wine and adding customers into their database. Second, they educate their customers about wine making process which increases customer interest and awareness that produces ripple effect in motivating more customers. Hence, through word of mouth, there is stronger market capture by wineries. Along with wines and wineries, local surroundings also play a vital role in development of wine tourism (9) argued that the attributes of a wine region,

such as the scenery and open spaces, provide an incentive to visit the region. Visitation to a wine region is frequently motivated by 'the attributes of a grape wine region', (12).

The 'presence of vineyards, the winemaking activity and the wineries where wine is produced & stored are three main elements in wine tourism'(15). The process of selecting, growing, caring of vines and harvesting of grapes is Viticulture, whereas the science of crushing grapes, fermenting, clarifying, maturing & blending of wine before bottling is termed as Vinification or Oenology. Combinations of both the processes along with professional skills produce wine as an end result. Factors that highly contribute to tourist decision making to unwind and feel their presence with nature include wine making process, natural surroundings at vineyards, fresh wine tasting and / or stay at vineyards.

Wine is made from the byproduct of fermentation (or part-fermentation) of juice of fresh grapes or other fruits in the form of an alcoholic drink. The natural chemical balance of grapes lets them ferment without the addition of sugars, acids, enzymes, water, or other nutrients. Fermentation takes place in a liquid when the sugar dissolved in the liquid is converted, either wholly or partly, into ethyl alcohol by the action of yeast. Yeast consumes the sugars in the grapes and converts them into alcohol and carbon dioxide. Different varieties of grapes and strains of yeasts produce different styles of wine.

The terroir concept encompasses various characteristics due to which wines are different. This includes the grape variety or varieties used, elevation and shape of the vineyard, type and chemistry of soil, the climatic conditions of the area, particular growing season, the local yeast cultures, method used to make the wine and the skills of the winemaker (13). The range of possible combinations of these factors can result in great differences among wines, influencing the fermentation, finishing, and aging processes as well. Wines made from produce besides grapes include rice wine, pomegranate wine, apple wine and elderberry wine and are generically called fruit wine. Wine is usually made from one or more varieties of the European Grape species *Vitis vinifera*, such as Pinot noir, Chardonnay, Cabernet Sauvignon, Gamay and Merlot. Wine tasting, first step of which is judging color of wine, is the sensory examination and evaluation of wine which contain many chemical compounds similar or identical to those in fruits, vegetables, and spices. The amount of residual sugar in the wine after fermentation decides the sweetness of wine relative to the acidity present in the wine. In case of dry wine, there is only a small amount of residual sugar. Breathing of wine is the process of opening the bottle and letting the wine "breathe" or interact with air for a couple of hours before serving, while others recommend drinking it immediately.

II. VITICULTURE & VINIFICATION

The process of viticulture is divided into systematic steps. Each step has its own importance and effects that

contribute to the quality and quantity of grapes produced. Steps involved are;

Bud Burst- This process starts in spring season when buds grow out of stems and produce shoots. Usually temperature is around 10 Degrees Celsius.

Flower Clusters –In this stage there is growth of shoots which leads to flower clusters. Depending upon growing conditions and variety of vines used there could be two to three flower clusters on every shoot.

Flowering and Fruit Set- Soon after the clusters, flowers grow and develop into berries stage. This is a very quick phase where these berries develop seeds within.

Berry Development- In this stage there are three sub stages with initial stage involving rapid growth of seed and berries. The berries rapidly accumulate acid turning into dark green color followed by slow growth stage where berries start becoming lighter in colour and accumulate high levels of acid in them. Finally berry development increases the growth of berries and grapes begin to soften. This stage is quick and coincides with ripening.

Harvest - During the harvest stage there is a well balance between sugar and acid in grape. Depending upon the requirements of the type of wine, grapes may be harvested either before ripening, ideal ripe or over ripe.

Dormancy- During this stage the grape vines become dormant as the name suggests. They shed their leaves and repair lost nutrients. Pruning and training are done during this stage to optimize the production potential of grape vine. This also helps to develop structure of vine that aids utilization of sunlight and best produce.

The science of crushing grapes, fermenting, clarifying, maturing & blending of wine before bottling is termed as Vinification or Oenology. The five components of the wine making process include harvesting, crushing & pressing, fermentation, clarification, and aging & bottling. Wine making process also called vinification or Oenology includes following steps,

Harvesting- this is the first step in wine making. The time of harvest of grapes is most important part as it decides the type of wine produced. This is determined by combination of old fashion tasting and modern scientific methods. Harvesting can be done either manually or by machines but hand picking is preferred.

Crushing and Pressing- This process involves secretion of juices from grapes through pressing. The harvested grapes are sorted for rotten or under ripe fruits before they are crushed. Mechanical pressing keeps in quality of wine and longevity. Once the juices are extracted, it is left with Must to retain red color while in case of white wine juices are separated from Must.

Fermentation- fermentation process begins naturally after the grapes are pressed. Once the fermentation is triggered, the process takes somewhere 10 days to one month until all sugars are converted into alcohol. This

process is stopped in some wines that require being sweet in nature.

Clarification- As the name suggests, in this stage wine is clarified to get rid of solids such as tannins, dead yeast cells and proteins. This is done through different methods ranging from bigger filters to fining. The clarified wine is thus moved to barrels for ageing or even bottling.

Ageing and Bottling- During the final stage, depending upon the wine, it is either bottled immediately or left in wine barrels/ bottles for ageing to smooth wine further. Hence this completes process of wine making.

III. WINE HISTORY

History of Wine making dates back to about 5000 BC in Georgia near the Caspian Sea, where The Romans, who learnt the art of wine making from the Greeks, took it to France on the banks of the Rhine. Later, Christian missionaries took wine making even further. From Europe wine making spread with European settlement to both North and South America, to South Africa, and to Australia and New Zealand. Wine is now made almost everywhere in areas where climatic conditions suit the growing of vines, where the climate is mild and warm enough for the grapes to ripen but where there is a definite but not too frigid winter, allowing the vines a period of rest.

Wine-production has existed all through the vast majority of India's history. In 1300 AD the Persian intruders brought grape production in the north of India and into the Aurangabad region of Maharashtra. The Portuguese and British colonizers planted vines to fulfill their interest that went with the same pattern spreading all around different states of the country. But in the end of the 19th Century, there was a major setback to Indian wine industry by the phylloxera mite that crushed extensive lot of India's vineyard. Another setback for Indian wine producers, after independence was the ban on creation and utilization of liquor in few of India's states and administration urged wine producers to change over to table grape generation.

Since early 2000's, India is emerging as an upcoming market for wine. Geographically India is located at temperatures zones favorable for growth of wine grapes. In India grapes are grown under three distinct agro-climatic zones, namely, sub-tropical, hot tropical and mild tropical climatic regions.

Sub-tropical Region: As the name suggests, this region has temperature between 28° and 32° N latitude. It covers the north western plains of India which includes Delhi; Meerut district of Uttar Pradesh; Hissar and Jind districts of Haryana; and Bhatinda, Ferozpur, Gurdaspur and Ludhiana districts of Punjab. Since the bud break starts in the first week of March while the rains arrive in the first week of June, there is only 90-95 days available from the initiation of growth to harvest.

Hot Tropical Region: This is the major viticulture region with temperature between 15° and 20° N latitude,

accounting for 70 percent of the area under grapes in the country. It covers Nashik, Sangli, Solapur, Pune, Satara, Latur and Osmanabad districts of Maharashtra; Hyderabad, Ranga Reddy, Mahbubnagar, Anantapur and Medak districts of Andhra Pradesh; and Bijapur, Bagalkot, Belgaum, Gulberga districts of northern Karnataka.

Mild Tropical Region: It covers Bangalore and Kolar districts of Karnataka; Chittoor district of Andhra Pradesh and Coimbatore; and Madurai and Theni districts of Tamil Nadu. It has temperature from 10° and 15° N latitude. In a year the maximum temperatures sometimes exceed 36°C, while the minimum is about 12°C.

III-A WINE TOURISM SCENARIO

Maharashtra and Karnataka has the optimum climate for grape cultivation to produce world class high-quality grapes. Wine tourism, the most recent pattern in the Indian wine industry, has developed with dynamic cooperation of the significant wine players (producers and distributors) who are broadly showcasing wine tourism for monetary gains. By adding various facilities such as hotels/inns, restaurants into their wineries, it enhances tourist's interest thereby promoting wine tourism. Currently, there are 29 working wineries in the Nashik district and most of them have the facility of wine tasting centre. While some also offer wines at a retail price, there are others who have picturesque in-house restaurants overlooking the vineyard. Among all there are three major players – Chateau Indage, Grover Vineyards and Sula Vineyards. A lot of important wineries like Grover Zampa, York, Charosa, Vallonné, Vintage Wines etc, are open to visitors for wine tasting. Sula Vineyards has hourly winery tours which include a visit around the estate and wine tasting at the cellar. Sula vineyard also has a 32-room resort. Sula also organizes a music festival, "Sulafest" in the month of February each year which attracts wine lovers both from India and from abroad.

Despite the growing awareness and love for wine, India is still far from being a wine-drinking country. With 6 million bottles sold annually, its annual consumption is .006 bottles a head against the world average of 5. Despite Indian wineries making such good wines, the country still has a long way to go in terms of having a wine culture and adequate facilities for wine tourism. Since most wineries are located in rural areas, lack of adequate infrastructure in terms of good roads, and connectivity is a major problem. The high taxation imposed on wines, regressive government laws with different taxation rules across various states, poor transportation, poor storage and not enough encouragement and incentives given to the wine industry is not helping the cause of wine tourism much.

Furthermore, India's grape processing units are inadequate and feature poor price realisation on produce. The international demand for adherence to quality parameters, coupled with a severe lack of infrastructure to support the high investment crop, has seen many producers suffer severe economic loss due to an

overexpansion in supply. As a result, many domestic wine companies are struggling to recover, with over 50 per cent of Maharashtra's wineries closing, lying dormant or reverting to the production of table grapes.

With the introduction of viticulture and vinification on larger scale, wine Industry in India will see enormous change. There are lots of wine regions whose potential needs to be tapped in wineries of Maharashtra and Karnataka. Such actions act as an example and motivation for others to follow. Many small to medium wineries which are either dying slow death or closed down in Maharashtra can revive, bringing back revenue generation, employment and infrastructural development of the area through viticulture and vinification as a means of wine tourism. With most of wineries located in Nasik in Maharashtra, there is lot of potential to tap the burgeoning population of Mumbai, Pune and Surat thereby creating lots of opportunities for development and promotion of wine tourism.

Government involvements

Since few years there is a slow yet a changing scenario in the Indian history with government actively promoting soft liquor and taking efforts to change the culture of hard liquor consumption to wine and beer. Several new bars have opened as exclusive wine and beer outlets.

Government of India has been taking keen interest in promotion of viticulture and vinification after realizing its importance. Government of Maharashtra has relaxed taxes and provides incentives in direct FDI in wineries. With all these efforts the missing link is the collaboration or co-ordination of all the players in promotion of tourism. As stated by (7), that wine tourism requires involvement of stakeholders for mutual benefit. This would include public- private partnerships in farming policies that cover overall development of wineries with special incentives in tourism development.

IV. CONCLUSION

Even though the popularity of wine is growing in India, growth in wine tourism still has to go fair bit. As India is traditionally a whiskey drinking nation, with maximum per capita consumption worldwide, there needs to substantial efforts in terms of education & awareness to support and promote wine consumption. The motivation factor for tourists in wine tourism provides multifaceted benefits while visitation to wineries (10), they enjoy rural landscape and natural environment (2), this also includes visitation to wine festivals, relaxation and exploration of different vineyards (5). Wine tourism has potential for employment generation through many sources such as tourist guides, additional local attractions; horse riding, souvenir shops, local cuisine etc. that provide locals to be part of development. The current cultivation area and annual production of grapes is not enough to cater to upcoming domestic and international market in near future. As there is high cost of initial investment in vineyard initiation in India, public private partnership can be of great help instead of providing loans to farmers.

This would work as an incentive for others to jump in and promote wine grape farming resulting in many fold increase. With nation's profound populace of around 1.2 Billion and low per capita utilization level of wine, there is immense potential for development of wine tourism in India. Hence there needs to be proper education and awareness drives initiated by state and central governments to support local wineries and aware people about benefits of wine in comparison to hard liquors. Local wineries can improve infrastructure to increase opportunities for social interaction which could enhance demand for wine tourism, driven by a desire to purchase wine, an interest in learning more about wine and, possibly, health reasons (12),(14). Farmers should be provided with security and insurance of crops for natural disasters in case of drought or unprecedented changes in weather with medium premium. More incentives should be given to quality grape production instead of just quantity, as that would lead to opening of international market. More association to international organisations should be listed to have exchange to latest trends and know how. Facilities should be provided to farmers for education and availability of information on soil and water salinity and other technical requirements in care and maintenance of vineyards. As more than 80 percent of the produce is used as table grapes, there is a need to diversify the uses of grapes. With major bulk of the produce is harvested in March-April, cold storage facilities need to be increased for saving and pricing of quality grapes. With tourism prospective, wine tourism has all the three A's, essentials of any tourism product. In terms of attraction, vineyards and wineries provide enough motivation to tourist for visitation. Accommodation needs to be improved and increased which should not be in terms of big infrastructures rather, villagers should be encouraged to add few rooms near their dwellings to provide bed and breakfast. For Accessibility, proper connectivity through railways and/or airways should be planned for wider prospective. (12.) (3) realized that the motivation factor for wine tourist are sampling & buying wines, socializing, learning about wine, entertainment, meet wine makers, etc.

Development of viticulture and vinification leads to promotion of wine tourism which has been acknowledged as a form of agricultural tourism, rural tourism, cultural tourism, industrial tourism and special interest tourism (16).

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