MULBERRIES AND RAMBUTAN WINE

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Introduction

Wine has been defined as fermented beverage and made of grapes without the use of acid, sugar, enzymes, water or other nutrients. The wine produced also can be fermented with the use of fruits and cereals. Most wine making country have great source of income for growing grapes and producing wine such as France, Italy, Spain and California among others.

Wine in general is helpful to one's health. The benefit of drinking wine showed that it usually helped to lessen heart ailments if consumed one cup after a sumptuous meal. Scientific research has indicated that grapes have much nutrition and wine also contains vitamins, minerals and all kinds of acid such as tannic acid. Studied also revealed that drinking wine help reduced risk of depression, bowels' tumor which is 50%. Red wine has anti-aging properties and breast cancer. It also emphasized that moderate drinking of wine help lowers of developing dementia.

This must be the reason why Filipinos are into wine making too, but there were limited areas in the Philippine where grapes are cultivated and used purposely for wine making. So instead of using grapes as main ingredients, wine makers opted to use fruits and infused it with herbs instead. However Filipinos opted to utilize what are abundant in their community like fruits and herbs as ingredients in making wine. Since then, different types of wines from different region in the Philippines were developed in association with their way of life and the product produced in one's locality and thru research. The famous Basin from Ilocos, Bignayfrom Mindoro, Tuba from coconut growing regions. Bicol and other highlights of study should be recognized. The

Black, red, and white mulberry are widespread in southern Europe, the Middle East, northern Africa and Indian subcontinent, where the tree and the fruit have names under regional dialects. Jams and sherbets are often made from the fruit in this region. Black mulberry was imported to Britain in the 17th century in the hope that it would be useful in the cultivation of silkworms. It was much used in folk medicine, especially in the treatment of ringworm. Mulberries are also widespread in Greece, particularly in the Peloponnese, which in the Middle Ages was known as Morea, deriving from the Greek word for the tree Morus, a genus of flowering plants in the family Moraceae, comprises 10-16 species of deciduous trees commonly known as mulberries, growing wild cultivation in many temperate world regions. and under

Rambutan is native to tropical Southeast Asia and commonly throughout Indonesia, Malaysia, Thailand, Vietnam, grown Cambodia and the Philippines. It has spread from there to various parts of Asia, Africa, Oceania and Central America. The widest variety of cultivars, wild and cultivated, is found in Malaysia. Around the 13th to 15th centuries, Arab traders that played a major role in Indian Ocean trade introduced rambutan into Zanzibar

and Pemba of East Africa There are limited rambutan plantings in some parts of India. In the 19th century, the Dutch introduced rambutan from their colony in Southeast Asia and Suriname in South America. Subsequently the plant spread to tropical Americas, planted in the coastal lowlands of Colombia, Ecuador, Honduras, Costa Rica, Trinidad and Cuba. In 1912, rambutan was introduced to the Philippines from Indonesia. Further introductions were made in 1920 (from Indonesia) and 1930 (from Malaya), but until the 1950s its distribution was limited. There was an attempt to introduce rambutan to the United States, with seeds imported from Java in 1906, but the species proved to be unsuccessful, except in Puerto Rico.

The researchers conducted this study in order to develop a unique wine using mulberries and rambutan offer another variant to those who are wine lovers.

Statement of the Problem

This study focused Mulberries and Rambutan. on the development of wine using

Specifically, problems: it sought to answer the following sub

1. What are the ingredients, tools, utensils, and procedures in the development and preparation of Mulberries and Rambutan Wine?

2. How do the three group respondents assess the quality characteristics of Mulberries and Rambutan Wine in terms of

2.1 Appearance;

2.2 Aroma;

2.3 Flavour;

2.4 Body of wine; and

2.5 After taste?

3. Is there a significant difference in the assessment of the three groups of respondents on the quality of Mulberries and Rambutan Wine using the mentioned variables?

4. What is the level of acceptability of Mulberries and Rambutan wine as evaluated by the three groups of respondents using the above-mentioned variables?

5. Is there a significant difference on the assessment as to the level of acceptability of Mulberries and Rambutan Wine?

6. What is the result of the alcoholic content analysis of Mulberries and Rambutan Wine?

Methodology

In the study, the descriptive research was used to determine the potentials of Simply Mulberries and Rambutan Wine. Descriptive research involves collecting data in order to test hypothesis or answer questions regarding the subjects of the study. In contrast with the qualitative approach the numerical. The data are typically collected through a questionnaire, an interview and or through observation. (Creswell, 2013)

Population and Sampling

The respondents of the study were (50) distributed as follows: (15) Wine Connoisseurs, (10) Wine Developers and (25) Consumers.

The study used the purposive sampling in the selection of the respondents needed in the study. Purposive sampling techniques also known also known as judgmental, selective sampling technique. Non-probability sampling focuses where the units that are investigated are based on the judgment of the researcher non-probability sampling to learn more about of different types of purposive sampling each different goal. (Garcia, 2013)

Table 1

Respondents of the Study

Respondents	Frequency	Percentage
Developers	10	20.00
Consumers	40	80.00
Total	**50**	**100**

Table 1 reflected the respondents of the study, among fifty (50) total respondents; they were divided into groups such as: 40 or 80.00 and 10 and 20.00 percent are developers.

Table 2

Respondents as to Gender

Sex	Developers		Consumers		Total	
	f	%	f	%	f	%
Male	6	60.00	28	70.00	34	68.00
Female	4	40.00	12	30.00	16	32.00
Total	**10**	**100.00**	**40**	**100.00**	**50**	**100.00**

Table 2 showed the distribution of respondents in terms of sex, wine developers whom are male female got got a frequency of 6 or 60.00 percent and frequency of 4 or 40.00 percent. As to consumer respondents, male got a frequency of 28 or 70.00 percent and female got a frequency of 12 or 30.00 percent.

Table 3

Respondents as to Civil Status

Civil Status	Developers		Consumers		Total	
	f	%	f	%	f	%
Single	5	50.00	21	52.50	26	52.00
Married	5	50.00	19	47.50	24	48.00
Total	**10**	**100.00**	**40**	**100.00**	**50**	**100.00**

Table 3 depicted the distribution of respondents in terms of civil status, both wine developers who are single and married got a frequency of 5 or 50.00 percent. As to consumer respondents, single got a frequency of 21 or 52.50 percent, while married got a frequency of 19 or 47.50 percent.

Summarily, majority of the respondents are single with a frequency of 26 or 52.00 percent.

Table 4

Distribution of Respondents as to Age

Age	Developers		Consumers		Total	
	f	%	f	%	f	%
41 - 45	1	10.00	1	2.50	2	4.00
36 - 40			3	7.50	3	6.00
31 - 35	3	30.00	3	7.50	6	12.00
26 - 30	3	30.00	12	30.00	15	30.00
21 - 25	3	30.00	21	52.50	24	48.00
Total	**10**	**100.00**	**40**	**100.00**	**50**	**100.00**

Table 4 shows the frequency count and percentage distribution of respondents in terms of age group, wine developers who are 31-35, 26-got 30 and 21-25 years old a frequency of 3 or 30.00 percent, 41-45 years old got a frequency of 1 or 10.00 percent. As to consumers respondents, 21-25 years old got a frequency of 21 or 52.50 percent, 26-30 years old have a frequency of 12 or 30 percent, and both 31-35 years old and 36-40 years old got a frequency of 3 or 7.50 percent and lastly 41-45 got a frequency of 1 or 2.50 percent.

As a whole, majority of the respondents are 21-25 years old with a frequency of 24 or 48.00 percent.

Table 5

Respondents as to Educational Attainment

Educational Attainment	Developers		Consumers		Total	
	F	%	f	%	F	%
Master's Degree	2	20.00	1	2.50	3	6.00
With Master's Unit	1	10.00			1	2.00
Bachelor's Degree	7	70.00	26	65.00	33	66.00
High School Graduate			13	32.50	13	26.00
Total	**10**	**100.00**	**40**	**100.00**	**50**	**100.00**

Table 5 presented the frequency count and percentage distribution of respondents in terms of educational attainment, wine developer with bachelor's degree got a frequency of 7 or 70.00 percent and master's degree got a frequency of 2 or 20.00 percent and with master's unit's has

a frequency of 1 or 10.00 percent. As to consumer respondents, bachelor's degree got a frequency of 26 or 65.00 percent, undergraduate got a frequency of 13 or 32.50 percent and master's degree got a frequency of i or 2.50 percent.

As a whole, most of the respondents had bachelor's degree with a frequency of 33 or 66.00 percent.

Statistical Treatment of Data

The following statistical tools are used treatment of the data:

1. Percentage It was used to indicate the ratio or proportion of the frequencies of the different variables to describe the profile of the respondents.

2. Weighted Mean This denotes to get the average response of the respondents perceptions on a qualitative response. It will be used to determine the quality characteristics and level of acceptability of Mulberries and Rambutan Wine.

Formula:

$$X = \frac{\Sigma \, fx}{n}$$

Where:

X = mean

∑ = summation

f = frequency

x = midpoint (M)

n = total number of respondents

The responses of each quality characteristics of "Mulberries and Rambutan Wine" are assigned values using the "Five-Point Likers Scale" method, the categories and equivalent points are as follows:

Option	Verbal Interpretation	Range Value
5	Excellent (E)	4.20-5.00
4	Very Good (VG)	3.40-4.19
3	Good (G)	2.60-3.39
2	Poor (P)	1.80-2.59
1	Very Poor (VP)	1.00-1.79

3. t-test This is used to determine whether or not the significant existed between the perception of the local tourist and the foreign tourist respondents. It is solved be using the formula.

The following formula help compute the t-test:

Formula Used:

$$M = \frac{\Sigma \, (x)}{N}$$

Where:

M = the arithmetic mean

Σx = sum of the scores

N = No. of scores

Summary

The following are the findings of the specific problems that were raised in the study.

1. On the ingredients, tool and utensils, and procedures used in the preparation of Mulberries and Rambutan Wine.

Ingredients. Mulberries, Rambutan, Yeast, White sugar, Water.

Tools and Utensils. Strainer, Transparent Hose, Cotton Cloth, Clear Bottles, Teaspoon, Spoon, Knife, Tupperware, Funnel, Stainless Pot, Wooden Spoon, Juicer

Procedurein the Preparation of Mulberries and Rambutan Wine are Prepared all the ingredients and materials used in the preparation of Mulberies and Rambutan Wine; Wash Mulberries and Rambutan; Put 5

liters of water in a pot, turn on the stove then wait until it boils; Put the rambutan and wait until the rambutan was cook; Turn off the stove then put the mulberries; Add sugar then stir it until the sugar is dissolved: Wait until it reaches warm temperature then put the yeast; When the yeast if fully activated, pour it into bottles then tightly close then put into dim place, then wait until 7 days; After 7 days, strain the wine using gauze pad to remove residue or sediments, and then transfer it into a clean bottle for aging; After 6 months ready for packaging and labeling.

2. On the assessment on the quality characteristics of Mulberries and Rambutan Wine.

The consumers assessment of the developers, connoisseurs, respondents on the quality and characteristics of Mulberries and Rambutan Wine, rank no. 1 is "aroma" was rated excellent as evidenced by the obtained weighted mean of 4.57. Rank no. 2 is "color" was rated excellent as attested by the obtained weighted mean of 4.48. Rank no. 3 is "body" was rated excellent as affirmed by the obtained weighted mean of 4.47. Rank no. 4 is "taste" was rated very good as affirmed by the obtained weighted mean of 4.12 yielded an overall weighted mean of 4.41 interpreted excellent.

3. On the result of significant difference of Mulberries and Rambutan Wine in terms of quality characteristics.

On the result of significant difference on the assessment of the developers, connoisseurs, and consumers respondents on the quality characteristics of Mulberries and Rambutan Wine, it obtained a computed t value of 7.493which is greater than the critical value of t which is 4.26 at five percent level of significance with 2 and 9 degrees of freedom leading to the rejection of the null hypothesis and verbally interpreted significant. Since we failed to accept the null hypothesis, there is a strong indication that there is a significant difference on the assessment of the developers, connoisseurs, and consumers' respondents on the quality characteristics of Mulberries and Rambutan Wine in terms of taste, color, body, and aroma.

4. On the respondent's assessment on the level of acceptability of Mulberries and Rambutan Wine.

On the assessment of the developers, connoisseurs, and consumers respondents on the level of acceptability of Mulberries and

Rambutan Wine, rank no. 1 is "body" was rated highly acceptable as verified by the obtained weighted mean of 4.51. Rank no. 2 is "color" was rated highly acceptable as attested by the obtained weighted mean of 4.50. Rank no. 3 is "aroma" was rated highly acceptable as confirmed by the obtained weighted mean of 4.48. Rank no. 4 is "taste" was rated highly acceptable as attested by the obtained weighted mean of 4.41 yielded an overall weighted mean of 4.62 interpreted as highly acceptable.

5. On the result of significant difference of Mulberries and Rambutan Wine in terms of level of acceptability.

On the result of significant difference on the assessment of the developers, connoisseurs, and consumers respondents on the level of acceptability of Mulberries and Rambutan Wine, it obtained a computed t value of 38.7633which is greater than the critical value of t which is 4.26 at five percent level of significance with 2 and 9 degrees of freedom leading to the rejection of the null hypothesis and verbally interpreted significant. Since we rejected the null hypothesis, there is a strong manifestation that there is a significant difference on the assessment of the developers, connoisseurs, and consumers' respondents on the level of acceptability of Mulberries and Rambutan Wine in terms of taste, color, body, and aroma.

6. On the result of the acid content analysis of Mulberries and Rambutan Wine.

Mulberries and Rambutan Wine contains 13.38% of Alcohol

Conclusions

Based on the findings revealed in the study, the following conclusions were formulated.

1. Mulberries and Rambutan can be used as main ingredient in the development and preparation wine.

2. The results manifest that Mulberries and Rambutan Wine has an excellent quality characteristic in terms of taste, color, body, and aroma as a result of the assessment of the selected developers, connoisseurs, and consumers respondents.

3. The result of the significant difference shows that the evaluation of wine developers, connoisseurs', and consumers were not the same on the quality characteristics of Mulberries and Rambutan Wine in terms of taste, color, body, and aroma.

4. Mulberries and Rambutan Wine was highly acceptable in terms of taste, color, body, and aroma to the selected developers, connoisseurs, and consumers' respondents.

5. The result of significant difference shows that the selected developers, connoisseurs, and consumers respondents does not concur with their evaluation on the level of acceptability of Mulberries and Rambutan Wine in terms of taste, color, body, and aroma.

Recommendations

In the light of the findings and conclusions, following are strongly recommended. the

1. Use the most accurate and proportional amount ingredients to acceptability. improved its quality characteristics of and

2. Mulberries and Rambutan Winehas to be packed in a proper packaging material and should contain a best before seal.

3. The finished product may be subjected to a Nutrient Analysis aside from the alcohol content.

4. Another study may be undertaken using using another fruits and different respondents.