JACKFRUIT SQUASH FLOWER AND ROSE WINE

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Introduction

Wine is an alcoholic beverage made from fermented grape. Grapes ferment without the addition of sugar, acid, enzymes, water, or other nutrients, as yeast consume sugar in the grapes and convert it to ethanol and carbon dioxide. Different varieties of grapes and strains of yeast produce different style of wine. These variations result from the complex interactions between the biochemical development of the grape, the reaction involved in fermentation, the terrier (the special characteristics imparted by geography, geology, climate and plant genetics), and the production process. Many countries define legal appellations intended to define styles and qualities of wine; these typically restrict the geographical origin and permitted varieties of grapes, as well as other aspects of wine production.

Aromatic wine is a wine which showcases several aromatics and perfumes as its opens and aerates in a glass or from a decanter. Aromatic wines may also showcase elements of various flowers in one moment and fruits in another, followed by savory or herbaceous nuances depending on the one, white, red or rose. Roses are considered as a symbol of love. Surprisingly, rose petals have a delicious flavor that can enhance a variety of drinks and fruit dishes. Besides being rich in vitamins and antioxidants, this popular edible flower has some pretty incredible health benefits that combat indigestion, constipation, urinary problems, stress, headaches, and arthritis.

Edible flowers have gained in popularity as an elegant way to garnish dishes, desserts and salads or for use as simple ingredients. Squash blossom are marketed as Individually wrapped male or female flowers, the latter sold either with or without the immature fruit attaché. The quality of the flowers at these locations varies greatly due to the high perishability of flowers and the lack of published information concerning postharvest handling.

Squash Blossoms are also sometimes called Zucchini Flowers, but they can come from any summer or even winter squashes they are the edible flowers of the squash plant and usually come in yellow and orange shades squash blossom are soft, delicate and taste mildly like the squash itself.

Being as light and delicate as they are, squash blossoms aren't a highly nutritional food. One cup of squash blossoms only has five calories. It also has one gram of carbohydrates and less than one gram of protein. Squash blossom are high in calcium and iron and especially high in vitamins C and A.

Jackfruit is absolutely one of a kind tropical fruit recognized for its unique shape, and size. The fruity flavor of its sweet arils can be appreciated from a distance. In common with other tropical fruits such as durian, banana, etc., it is also rich in energy, dietary fiber, minerals, and vitamins and free from saturated fats or cholesterol; fitting it into one of the healthy

treats to relish. Botanically, this popular Asian tropical fruit belongs to the family of Moraceae, of the genus; Artocarpusand is closely related to figs, mulberry, and breadfruit. Scientific name: Artocarpus heterophyllus. Jackfruit is an Indigenous and underutilized fruit crop with great yield potential and excellent nutritional qualities.

The researchers conducted this study in order develop and jackfruit. prepare squash wine flowers, out and of to the combination of rose petals as major Ingredients. It was also desire of the proponents to develop another variety of wine not yet found in the market yet nutritious because of the major ingredients used and find out the nutrition facts of the finished product.

Statement of the Problem

The focus of the study is to develop and prepare wine using jackfruit, squash flower and rose petals.

Specifically, it seeks to answer the following sub problems:

1. What are the ingredients, tools, utensils and procedures in the development and preparation of Jackfruit Squash Flower and Rose Wine?

2.How do the respondents assess the Jackfruit Squash Flower and Rose Wine in Terms of:

2.1 Color;

2.2 Taste;

2.3 Body; and

2.4 Bouquet?

3. Is there a significant difference in the evaluation of the respondents as to the quality characteristics of Jackfruit Squash Flower and Rose Wine using the above mentioned variables?

4. What is the level of acceptability of Jackfruit, Squash Flower and Rose wine to the selected groups of respondents?

5. Is assessment there to a significant difference among the the acceptability of Jackfruit Squash as Flower and Rose Wine?

6. What is the result of the Alcohol Content Analysis?

Methodology

This research used the descriptive method of research to determine the potentials of Jackfruit Squash Flower and Rose Wine. Descriptive research because it involves collecting data in order to test hypothesis or answer questions regarding subjects of the study. In contrast with the qualitative approach the data are numerical. The data are typically collected through a questionnaire, an interview, or through observation. (Creswell, 2008)

A survey questionnaire was prepared by the researchers to assess the quality and acceptability of Jackfruit Squash Flower and Rose Wine by the three groups of respondents.

Population and Sampling

The respondents were sampled and described to the selected variables to present their profile. There will be fifty (50) respondents composed of ten (10) wine developers, forty (40) wine consumers as shown in Table 1. On the next page.

This research used the purposive sampling in the selection of the respondents need in the study. They used the purposive and convenience sampling because the respondents were chosen on the basis of their knowledge on the information desired. (Marczyk, 2008) Convenience was used in the selection of the consumer respondents based on their availability.

Table 1

Respondents of the Study

Respondents	Frequency	Percentage
Wine Developers	10	20
Wine Consumers	40	80
Total	**50**	**100**

Table 2

Respondents according 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**

As shown in Table 2, 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 3

Respondents according 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**

As revealed in Table 3, 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.

In general, most of the respondents are male with a frequency of 34 or 68.00 percent.

Table 4

Respondents according 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**

As presented in Table 4, 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 5

Respondents according 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**

As discussed in Table 5, 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: in the

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 Jackfruit Squash Flower and Rose Wine.

Formula:

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

Where:

X = mean

∑ = summation

f = frequency

x = midpoint (M)

n = total number of respondents

The responses of each quality characteristics of "Jackfruit Squash Flower and Rose 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:

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

Where:

M = the arithmetic mean

Σx = sum of the scores

N = No. of scores

Summary

The following are the salient findings of the study:

1. On the ingredients, tools and utensils, and procedures used in the preparation of Jackfruit Squash Flower and Rose Wine.

Ingredients. 1 kilo Jackfruit, Squash flower, 4 Rose petals, 1 kilo Sugar, 14 tbsp. Active Dry Yeast, 5 liters of Water.

Tools and Utensils. Pot, Stove, Strainer, Spatula, Measuring Spoon, Measuring Scale, and Bottles.

Procedures in the preparation In Jackfruit Squash Flower and Rose Wine. 1. Prepared all the ingredients and materials used in the preparation of Jackfruit Squash Flower and Rose Wine; 2. Wash squash flower and rose petals; 3. Put 5 liters of water in a pot, turn on the stove then wait until it boils; 4. Put the jackfruit and wait until the jackfruit was cook; 5. Turn off the stove then put the squash flower and rose petals; 6. Add sugar then stir it until the sugar is dissolved; 7. Wait until it reaches warm temperature then put the yeast: 8. When the yeast if fully activated, pour it into bottles then tightly close then put into dim place, then wait until 7 days: 9. After 7 days. strain the wine using gauze pad to remove residue

sediments, and then transfer it into a clean bottle for aging; 10. After 6 months ready for packaging and labeling.

2. On the respondents assessment on the quality characteristics of Jackfruit Squash Flower and Rose Wine.

The assessment of the wine developers and wine consumer respondents on the quality characteristics of Jackfruit Squash Flower and Rose Wine yielded an overall weighted mean of 3.66, verbally interpreted as very good.

3. On the comparison of assessment as to the quality characteristics of the Jackfruit Squash Flower and Rose Wine.

The result of significant difference in the assessment of the wine developer and wine consumer respondents on the quality characteristics of Jackfruit Squash Flower and Rose Wine, it obtained a computed t value of 3.3499 which is greater than the critical value of t which is 2.014 at five percent level of significance with 48 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 between the assessment of the wine developer and wine respondents on consumer the quality characteristics of Jackfruit Squash Flower and Rose Wine in terms of color, taste, body, and bouquet.

4. On the respondents assessment on the level of acceptability of Jackfruit Squash Flower and Rose Wine.

The assessment of the wine developers and consumer respondents on the level of acceptability of Jackfruit Squash Flower and Rose Wine yielded on overall weighted mean of 4.00, verbally interpreted as acceptable.

5. On the comparison of assessment as to the level of acceptability of the Jackfruit Squash Flower and Rose Wine.

The result of significant difference on the assessment of the expert and consumer respondents on the level of acceptability of Jackfruit Squash Flower and Rose Wine, it obtained a computed t value of 2.6363 which is greater than the critical value of t which is 2.014 at five percent level of significance with 48 degrees of freedom resulted to the rejection of the null hypothesis and verbally interpreted significant. Since we reject the null hypothesis, there is a strong manifestation that there is a significant difference between the assessment of the wine developer and wine consumer respondents on the level of acceptability Jackfruit Squash Flower and Rose Wine in terms of color, of taste, body, and bouquet.

6. On the result of the alcohol content analysis of Jackfruit Squash Flower and Rose Wine.

Jackfruit Squash Flower and Rose Wine contains 4.81 ethyl alcohol as examined by the Department of Agriculture, Bureau of Plant Industry.

Conclusions

Based on the findings, the following are the conclusions:

1. Jackfruit, Squash Flower and Rose can be used as main ingredients in the development and preparation of wine.

2. Jackfruit Squash Flower and Rose Wine have very good quality characteristics as assessed by wine developers and consumer respondents.

3. The wine developers and consumers do not have common evaluation on the quality characteristics of Jackfruit Squash Flower and Rose Wine in terms of color, taste, body, and bouquet.

4. Jackfruit Squash Flower and Rose Wine is found to be acceptable as assessed respondents.

5. The two groups of respondents differed in their assessment as to the acceptability of the Jackfruit, Squash Flower and Rose Wine.

6. Jackfruit Squash Flower and Rose Wine contains ethyl alcohol.

Recommendations

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

1. Use another variety of jackfruit as ingredient in the preparation aside from edible flowers to ensure a more improved product.

2. Further experimentation may be undertaken to improve the color, bouquet and body of the wine that would lead to excellent evaluation.

3. Jackfruit squash flower and rose wine may be packed using the appropriate bottle and the best before seal may be indicated.

4. The required fermentation and aging process for the vine may be considered to make it highly acceptable to the respondents.

5. Another study may be undertaken using the same parameter but other respondents and setting to validate the reliability of the result.

6. Jackfruit Squash Flower and Rose Wine need to improve the taste and alcohol percent.