

## **BIBLIOGRAPHY**

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## **ABSTRACT**

This study is about the quality management practices of ube wine producers. Survey questionnaires were administered to six (6) respondents which were followed by a personal interview. These six respondents included 5 processors/workers and the manager who were all members of the Kayabang Multipurpose Cooperative located in Bayabas Sablan, Benguet.

The production practices of the organization composed of twenty (20) stages started from the procurement of raw materials until the packaging of finished product in crates for storage and delivery.

The quality management practice of the organization involved four categories and each category was subdivided into sub-categories according to the specifications of each of main category. According to the manager, they had set quality standards for their product. These set standards should be followed and achieved but according to them, they were not able to meet these set standards and hence, the processors were undergoing re-training.



The organization, according to the manager, had encountered some problems especially on wine production aspects. These problems included oxidation on the fermentation and aging stages. On the part of their quality management practices, the organization experienced one great problem which was the high acidity level of the wine and thus, some wines turned to vinegar.

It is hence recommended that the organization together with government agencies that have technical knowledge and skills on wine production and on total quality management should conduct intensive trainings and seminars for the ube wine processors and should be coupled with the setting of quality standards for wine processing that should be strictly monitored.



## INTRODUCTION

### Rationale

Wine has been around for thousands of years. From ancient civilizations to modern times, wine has been produced and enjoyed by many, from peasants to kings. The word wine comes from Latin *vinum*, akin to Greek *oinos*, which means grape wine, in a larger sense; it is the fermented juice of other fruits.

Wines are also made from fruits other than grapes. Fermented apple cider is considered a wine. Perry is produced from pears. There are also cherry wines, plum wines, and wines made from various berries. Many fruit wines are home-fermented products, but some are manufactured commercially as well. Fruit wines contain about 12 percent alcohol.

Yam commonly known as ube is a perennial herbaceous vine cultivated for the consumption of their starchy tubers. In the Philippines, the purple ube species of yam (*Dioscorea alata*), is eaten as a sweetened dessert called "ube halaya", and is also used as an ingredient in another Filipino dessert, halo-halo.

In the province of Benguet, the root crop grows best. Due to the abundance of supply of ube, enterprising organizations come up with an idea on how to utilize excess ube into something profitable which leads to the development of ube wine.

One of these enterprising organizations is the Kayabang Multi-Purpose cooperative in Bayabas, Sablan, Benguet which has found a money-making venture in making ube wine through the help of DAR-Cordillera Administrative Region. Ube wine was one of the saleable items at the recently concluded Agrilink/Foodlink/ Aqualink trade fair at the World Trade Center because it is organic, local, and healthy alternative to red wine. There



are also enterprising organizations in the province of Benguet producing ube wine. Due to changing taste and preferences of ube wine consumers, quality become one of the most critical factor in producing ube wine because it significantly affects the choice of consumers.



## REVIEW OF LITERATURE

### Understanding Quality

Quality is defined as meeting or exceeding the needs and expectation of the customer. Thus, the goal of the business should be to find out what the customer wants and then fine tune the process to ensure that they get it. The primary dimensions of product quality include; a. performance, b. features, c. reliability, d. conformance, e. durability, f. serviceability, g. aesthetics, h. perceived quality (Allen, 2006).

However, Allen (2006) stated that service quality is attracting equal or more attention. These are; a. responsiveness, b. reliability, c. accuracy, d. knowledge of employees, e. courtesy, f. consistency, and g. speed. These listed dimensions of product and service quality are, in a broad sense, generic to most situations. However, every business is unique, and if customer satisfaction measurements are to be meaningful, expectations should phrase in the language of customers for each distinct market segment. Also, are more critical than others and it is wise to determine the relative importance of each need. After measuring the satisfaction levels, emphasis can then be placed on improving performance in areas important to the customer but where the organization may be lacking in comparison to the quality delivered by competitors.

### Quality as a Business Goal

Quality connotes a meeting or exceeding the needs and expectations of the customer. Thus, the goal of a business should be to find out what the customer wants and then fine tune the process to ensure that they get it (Allen, 2006 as cited by Dagupen and



Lubrica (2006). Allen (2006) concluded that the primary dimensions of product quality include performance, features, reliability, conformance, durability, serviceability and service quality as responsiveness, reliability, accuracy, courtesy, consistency and speed.

On the other hand, Bird (2005) stated, "Quality assurance is the totality of all the management actions and procedures that set out to achieve this high standard, and thus will incorporate quality control." He said Quality Assurance can be seen as a management system while Quality Control is the proactive control of the actual processing of the food/product, which typically requires laboratory testing and monitoring. Both Quality Assurance and Quality Control require vigilance on the part of all involved with making wine from the establishment to the storing of the finished product.

#### Continuous Quality Improvement

Continuous quality improvement begins by identifying customer expectations for all key "moments of truth" the critical interactions customer have with the organization. This can include contact with, for example, internal support groups, collection individuals, sales representatives, management, or direct service provides. The best way to understand customer expectations is to listen to customers using qualitative research techniques. This usually requires skilful probing by someone practiced in customer satisfaction measurements (Allen, 2006).

After identifying expectations, customer satisfaction can readily be measured. However, this requires the customer to answer specific questions about he or she feels about the company performance. This is why it is so important to capture their interest and build the credibility needed to gain their cooperation.



## METHODOLOGY

### Locale and Time of the Study

The research was conducted in Sablan, Benguet specifically at Sitio Colat Bayabas Sablan, Benguet where the Kayabang Multipurpose Cooperative is located from the month of December 2012, to January 2013.

### Respondents of the Study

The respondent of the study was the manager of the Kayabang Multi-purpose Cooperative which is located in Bayabas, Sablan, Benguet. The previously mentioned cooperative is engaged in ube wine processing. Other respondents of the study are 5 individuals who are directly involved in ube wine processing. A total of 6 respondents was taken as respondents of the study.

### Data Gathering Procedure

The data gathering was done by administering of questionnaires to the respondents and followed by a personal interview to validate the written answers of the respondents on the questionnaires.

### Data Gathered

The data gathered are the profile of the respondent, their knowledge and understanding about quality. Production practices and quality management practices and/strategies of the respondents was also taken. Problems encountered by the respondents with regards to their production and quality management are also asked.

### Data Analysis

The data gathered were tabulated and analyzed using frequency and other appropriate tools to be used.



## RESULTS AND DISCUSSION

### Profile of the Respondents

Table 1 presents the profile of the respondents which includes their age, gender and educational attainment. Most of the processor-respondents have ages between 45-54 (40%), the other processors have ages between 25-34 (20%), 35-44 (20%), and 55-64 (20%). On the other hand, the manager has an age ranging from 45-64.

For the respondent's gender, all of the respondents are female and in contrast, the manager is a male. On the part of the respondent's educational attainment, most of the respondents (40%) of them have attended high school and college level. With regards to their number of years in the industry, all of the processors including the manager have been engaged in wine processing for 5-6 years.





## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Summary

The study was conducted to determine the quality management practices of ube wine producers. It aimed to: determine the knowledge and understanding of ube wine producers with regards to quality; determine the production practices of ube wine producers; determine their quality management practices; and, determine the problems faced by the producers with regards to production and on quality management.

The study was conducted using survey questionnaires for the manager and for the processors/workers which is followed by a personal interview. The gathered data were statistically analysed and interpreted according to the objectives of the study. Statistical tools used in describing the data were frequency counts and percentage.

Most of the respondents have ages ranging from 45-54 and some have ages ranging from 23-34, 35-44, and 55-64. Most of the respondents are female and only the manager is a male. All of the respondents were engaged in wine processing for 5-6 years. With regards to their educational attainment, most of the respondents have been in high school and college and only few has been on the elementary level.

Most of the respondents said that quality has something to do with perfection of the product, consistency, eliminating waste, compliance with policies and procedures, providing a good usable product, and delighting or pleasing the customers.

With regards to the trainings and seminars attended by the respondents, most of the respondents have attended the food processing training conducted by BSU in the year 2005. Some of the respondents have also attended the following trainings and seminars: food



handling and labelling, wine production, wine enhancement training, good manufacturing practices, entrepreneurial management, financial management, cooperative convention, basic leadership and values for development, organic agriculture, and meat processing seminar.

On the part of the business, it is involved in processing, repacking, retailing, and wholesaling. It is registered and operated as a cooperative and engaged in ube wine processing for 6 years with a province wide scope of market and, the types of customers are wholesalers, retailers, and walk in buyers. The cooperative started with a total capital of PHP 100,000 and has a present total asset of PHP 800,000.

The processing area located at Sitio Colat Bayabas Sablan, Benguet just after the Bayabas Elementary School. The location and processing area was evaluated using 2 categories which are the location and processing area, and the layout which is further subdivided according to the specifications of each category. The criteria used in evaluation are: accessibility to raw materials, adequacy of space, ventilation, lighting, adequacy of facilities, accessibility to customers, layout specification, attractiveness of the processing area, safeness of the workers and customers on the area, and, the maximization of the space. The processing location, area, and layout was evaluated by the manager and according to the result, it has a good location, processing area, and layout.

With regards to the procurement of raw materials, the main ingredient which is the ube is supplied by the members and some are procured from other suppliers. The other raw materials like the sugar, yeast, and water are procured from other suppliers. When it comes to the type of raw materials, the ube that they use is the purple colour. The sugar used is the brown one. The yeast they use is the red star dry yeast which is suitable for wine and



vinegar production. With regards to the water utilized by the organization in processing, it is laboratory tested. The organization has set some standards in selecting their raw materials. The ube that they process must be fully matured, damage/blemish free, and must be grown organically. The organization only processes tuwiran, daking, and tungkol variety and they also add some sampero ube variety for better aroma. With regards to the proportion of raw materials, the organization uses a mixture which is 14 kg of ube is to 2 table spoon red star dry yeast, 10 kg brown sugar, and 40 litres of water.

The wine processing of the organization is composed of 20 stages which are as follows; a) procurement of raw materials, b) inspection and sorting, c) washing/cleaning, d) boiling, e) juice extraction, f) measuring of the juice, g) cooling of the juice, h) pre filtration, i) weighing of sugar and yeast, j) adding of sugar and yeast, k) mixing, l) fermentation, m) pasteurization, n) aging, o) filtration, p) bottle sterilization, q) bottling, r) closing and sealing of containers, s) labelling, and t) packing to crates for storage and delivery.

With regards to the quality management practices of the organization, they apply brainstorming wherein all of the members of the organization gather together and share their ideas in order for them to be able to create new ideas and for them to find solutions to problems if there are any that will arise during the business operation. They have also set some quality standards for their product. These standards include same taste in all ube wine products, same mixture of raw materials, and the ube variety selection standards. The organization also do accurate record keeping, strict monitoring while processing to avoid deviations on the processing, they maintain safeness of the product on the storage area and on transportation in order for them to assure the good quality of the product. In addition,



they are also certified by BFAD and DTI and they are given a good manufacturing practice certification, and, their wine product is laboratory certified. They also see to it that quality is the same in all of their wine product by inspecting regularly on the procurement of raw materials, during processing, on storage and during transporting the product.

The organization experiences problems in wine processing and on quality management. On the part of wine processing, they experience problem on material sourcing because they encounter cross breeds between purple and white ube/yam. Oxidation is the problem faced by the organization during fermentation and aging. With regards to marketing, they experience problem on heavy competition because there are many individuals and organizations that are into wine business. On the other hand, they also experience problem on quality management which is the high acidity level of the wine thus, some wine turns to vinegar which is not supposed to be because according to them, this results to low profit, and it gives a negative image on the product.

### Conclusions

Based on the results of the study, the following conclusions were drawn:

1. Most of the respondents claim that quality has something to do with the perfection of the product, consistency in all aspects, eliminating waste, compliance with policies and procedures, providing good usable product, and delighting or pleasing the customers;
2. The production practice of the of the organization starts with the harvesting and procurement of the different raw materials and fallowed by inspection and sorting until such time that the finished product is packed and ready to be delivered to the outlets of the



organization such as the barangay food terminal centre. The production practice of the organization is governed with strict monitoring in all the production levels to ensure that there are no deviations in the production standards set by the organization and also to ensure the production of a good quality ube wine;

3. The quality management practice employed by ube wine producer includes four quality categories. The first one is the quality control tool wherein the organization uses brainstorming and all of the members of the organization gather together to share their ideas, discuss matters, and find solutions to problems if there are some. Another category is the quality standards wherein the organization has set some standards for their product which includes same taste in all the ube wine product, same mixture of raw materials, and the ube variety selection. The third category is the quality product assurance that would assure the safeness and quality of the product and these are; a) record keeping, b) strict monitoring while processing to avoid deviations, c) they are certified by BFAD and DTI, d) they maintain safeness of the product on the storage area and on transportation, and e) the product is laboratory certified. The last category is the establishment of quality product wherein they see to it that quality is the same in all outputs in terms of consistent taste, colour, aroma, and same alcohol content. They also do inspection in all the level of production to assure the production of a quality product;

4. The problems faced by the producers include cross-breeds between white and purple ube tubers. On the part of fermentation and aging, the common problem is the oxidation of the wine. They have also encountered problem on wine bottle preparation because manual cleaning is too laborious and time consuming. On the part of marketing, the producers experience problem on the high level of competition because there are many



individuals and organizations that are in the wine business. On the part of quality management problem, they experience high level of acidity of the wine thus, some wines turn to vinegar which is not suppose to be; and,

5. The Kayabang Multipurpose Cooperative have met the production and quality standards set by the DTI and HACCP on some of their wine production stages only but then, the KMPC have partially met the standards set especially on the critical control points as mentioned by the said agencies.

### Recommendations

Based on the conclusions, the following are recommended.

1. Officers of the organization together with the local officials must coordinate with government and non government agencies that have the authority and technical knowledge and skills on wine production such as the DTI and DOST to conduct trainings and seminars to all the members of the organization most especially to the processors of the organization in order for them to upgrade their knowledge and skills in wine preparation and production especially on the critical control points as mentioned by HACCP so that they may be able to produce a better quality wine product;

2. The government agencies should also set quality standards for wine production and also, these government agencies should not only set standards, they should also accompany it with intensive trainings and seminars regarding the standards set. Strict monitoring also should be conducted by these agencies to make sure that ube wine producers are applying and following the set quality standards;



3. According to Pandell, it is easy to manipulate the acidity level of wines hence, the organization should invest on additional equipments such as the pH meter used in measuring the acidity level of wine in order to know if the wine is acidic or basic. According to Pandell, wines should have pH ranging from 3.3 to 3.7. With regards to the high cost equipments such as the wine distilling apparatus, the organization should top up supports of government agencies for them to be able to acquire these facilities;

4. With the aim to have uniform taste of the wine products, the measuring equipments should be properly marked and calibrated to have a uniform mixture in the entire wine production operation. Cleanliness and sanitation of the production area/processing area should also be monitored and maintained to avoid contaminations as mentioned by DTI; and,

5. With the aim of having a more competitive product, innovation of the product packaging and labels should be done.



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