

NIGERIA PIONEER GIN - "AMEREKA": AN EVALUATION OF ITS PRODUCTION, PROCESSES AND CONTENT WHICH CAN EARN NIGERIA HARD CURRENCY

Engr. Tech E. A. Agbamu, (Snr.)

Abstract

"Amereka" also known as "Ogogoro" is a household name among the various gin produced in Nigeria. This study of "Amereka" production was carried out so as to determine the acceptance of this Nigeria pioneer gin by the populace outside and within Nigeria. The task analysis indicated that it compared favourably with the Russian Volka, the Hungarian Pulica, the London Dry gin and a host of others either imported into Nigeria or similar ones distilled within Nigeria. In certain comparison, "Amereka" is found better. Recommendations which could lead to the improvement of "Amereka" distillers performance and wide acceptance are adduced; so that Nigeria can earn hard currency from its production.

Introduction

Man has been given a kindly gift by nature, four essential companions to sustain and console him on his terrestrial pilgrimage on earth (Waugh, 1969). These companions have provided the solace, relaxation and stimulus that a man needed if he is to complete the arid journey on earth. Drink is a blessing that provides one the rare solace in this uncomfortable and savage world.

The first chapters of Genesis in the Holy Bible tell stories of the creation and earliest history of mankind. When Noah made the revolutionary change from nomadic to a settled life, it was perhaps significant that this husbandman planted a vineyard; and he drank of the wine and was drunken (Holy Bible). Gin is a rectified spirit distilled from malted barley, maize and rye with potatoes and other matters (Durken, 1971). Distilling "Amereka" in Nigeria was introduced by the Urhobos (Sobos) and well established in their times up till today. Before the amalgamation of Nigeria "Amereka" had been with the Urhobos (Okoro, 1999). The name emanated from the Americans ("Oyibo") during the slave trade between the Urhobos in the Delta region and the Americans so to say. These "Oyibos" (whitemen) gave the "Ovies" (kings), the "Oloroguns" (chiefs), the "Ototas" (speakers), the "Okpakos" (elders), etc. foreign gin and when palm-wine from raffia trees were distilled, the resultant drink became widely known and called "Amereka" which "Ogogoro" has taken over the name, but within the Urhobos, "Amereka" is widely and still called. The gin and the name spread throughout the land, the various empires and kingdoms then as it competed favourably with the foreign gin. The Americans taught the Urhobos the technology of "Amereka" production. Many names have been given to "Amereka", such as "Ogogoro", "Agbakara", "Kikana", "Akpeteshi", "Sapele-water", "Push-me, I push you". However, "Ogogoro" became popular as the other name of "Amereka" in this country.

Brief Historical Details

When Nigeria became a British colony and even after her independence and a Republic status, "Amereka" that gained fame, recognition and competed favourably with foreign gin, became known and called illicit gin. "Amereka" that is a ceremonial gin among the Urhobos and other clans/tribes within the Delta region suddenly became illicit gin that caused fear to the Urhobos as the governments then ordered. Both the distillers, the dealers and consumers went through many and various agonies caused by the then various governments of Nigeria. Majority of them were imprisoned, some were court-fined while some were either flogged as a punishment or shot dead when they tried to escape from arrest and prisons. In spite of these oppressions, some continued to distill "Amereka" secretly (Okoro, 1999).

In the seventies, late Dr. Tai Solarin Daily Times (1973), campaigned seriously and singly for the recognition and the removal of the word "illicit" as tagged to "Amereka" (Ogogoro). On the long run, he won and so "Amereka" found its route and feet again and grouped among those gin, beer, wine, etc. under

the liquor permit section of the Alcohol Act. Perhaps this gifted gin led to the recognition of the Urhobos as the Centre of Excellence in “Amereka” production. Certainly so as “Amereka” has remained the

habitual drink in Urhoboland which led to conversations, conversations to argument and argument to glimpses of truth. Early herbalists in Urhoboland and even today, recommended/recommend the use of "Amereka" as a way or method of taking their herbs in liquid forms which have saved many souls.

"Amereka" is a rectified spirit distilled from palm-wine which is gotten from raffia trees. These trees grow widely in swampy areas or along the riverbanks. They are tropical trees. Raffia tree fruits look yellowish when ripe, but not eatable. These fruits can be planted and nursed to maturity. Though palm-wine can also be gotten from palm trees, but in nearly all the locations visited raffia trees palm-wine was used for "Amereka" production. Palm-wine is known and called "Udi-Urhobo" (Urhobo drink) in Urhoboland. These raffia trees are largely found in South-east, South-west and South-south of Nigeria. When of age, they are usually tapped and the resultant liquid is known and called palm-wine. Palm-wine popularity is widely accepted by certain sections of the populace in Nigeria; popularly called "palmy". It is both a ritual and ceremonial drink in certain parts of Nigeria as "Amereka" is to the Urhobos (Okpako. 1999).

The objectives of this study was to look into the production of "Amereka" locally from palm- wine. It further looked into its acceptability through its chemical sensory evaluation and bottling and compared with other distilled gin in Nigeria including foreign ones. This study was based solely on visitations to various distilling points and locations of "Amereka", face to face questions and answers, physical participation, observations on distillation processes, consumption and the use of match-fire/as testing method. "Amereka" alcoholic content was not done as no equipment were available for such purpose. However, at the end of this study a 60cl bottle with "Amereka" was taken and tested in a laboratory and indicated a 50% of alcohol. It was on the high side, but it was also discovered that due to the mixture of yeast and sugar to the fresh palm-wine at will depending on the taste sensed by the mixer. This study also brought out some recommendations.

Materials And Methods

"Amereka" popularity cannot be over-emphasised in Nigeria among other locally distilled gin even from Burutu to Gembu and from Nembe to Kebbi. The materials required in the production of "Amereka" are as follows:

- a. storage tank(s)
- b. combustion chamber
- c. palm-wine
- d. boiler and its auxiliaries
- e. yeast and sugar
- f. bowl

Storage Tank: This is the equipment used to store mixed palm-wine with yeast/sugar for fermentation for the required period before distillation. This tank could be more than one depending on the quantity (litres) of palm-wine made available and number of tins (25 litres) of "Amereka" to be produced. In some locations visited for this study there were ten (maximum) and three (minimum) of storage tanks of two hundred litres of already mixed palm-wine. Most of these tanks are the empty lubricating drums fabricated to fall into their production system.

Boiler and its Auxiliaries: The boiler is constructed from empty lubricating oil drum. Its thickness is between 4mm and 6mm having 2-3 holes drilled on one end about few millimetres to the top to accommodate 25mm bore diameter copper pipes which are brazed to the boiler at an inclined angle to ease vapour flow. In some locations the operators used the rotten stem of either plantain or banana plant to seal these pipes to the boiler and other areas to be sealed. However, they were advised to use brazing for proper sealing. The boiler has an opening for filling and re-filling of concentrated alcohol (resultant of mixed palm-wine) which is covered during distilling processes. This opening is at the top of the boiler. At the bottom of the boiler, a drainage cork is provided to remove the following:

- a. waste residue of concentrated alcohol and
- b. cleaning water used to wash and clean the boiler after use (maintenance).

In some locations the above device is not used. Residue of concentrated alcohol and cleaning water are fetched out through the top opening. The FIGURE I brings out the set-up of “Amereka” distillation. In all the locations visited the operators (distillers) have common special ways of checking the level of concentrated alcohol inside the boiler under distillation: by lifting the cover of the opening to see the level.

Boiler Auxiliaries: Both the copper pipes, the condenser and the bowl are the boiler’s auxiliaries. The condenser is installed few millimetres from the boiler so also the support of the bowl. There are 2 - 3 holes drilled each on two sides of the condenser. The drilled holes enable the copper pipes to run through the condenser; the spots the pipes have contact with the condenser were brazed or sealed so that cooling water may not leak from the condenser. At the bottom of the condenser on one end, a drainage cork is provided to drain the cooling water as its temperature becomes useless to condensate the alcoholic vapour to liquid. Fetching of the cooling water is also applied in some locations. The top of the condenser is cut open. The copper pipes are so placed in the condenser so that the cooling water could cover every part of the pipes, while the pipes lie at an inclined angle through the two sides of the condenser.

The bowl used to collect distilled gin (“Amereka”) could be a plastic bucket or basin. It is placed at the spout that is under the spout of the copper pipes. In a nutshell, the boiler is where the concentrated alcohol is fired to boil thereby alcoholic vapour is produced while the condenser condensate the alcoholic vapour to liquid (“Amereka”) and finally collected by the bowl.

Combustion Chamber: The combustion chamber is an open type, having resemblance to the ones used locally for both cooking and frying garri. The flame is bridged on both sides. Log of wood is the fuel. In some locations, the chamber was constructed with clay while in some locations it was constructed with steel plates and bars. The combustion chamber also acted as the support for the boiler, while the supports for the condenser and the bowl were also either made of clay or steel bars and plates. The chamber **was** so made to have ample clearance to accommodate the log of wood which could achieve temperature between 100°C to 150°C which is enough to boil concentrated alcohol from substance into alcoholic vapour to get gin (Mitchel, 1977).

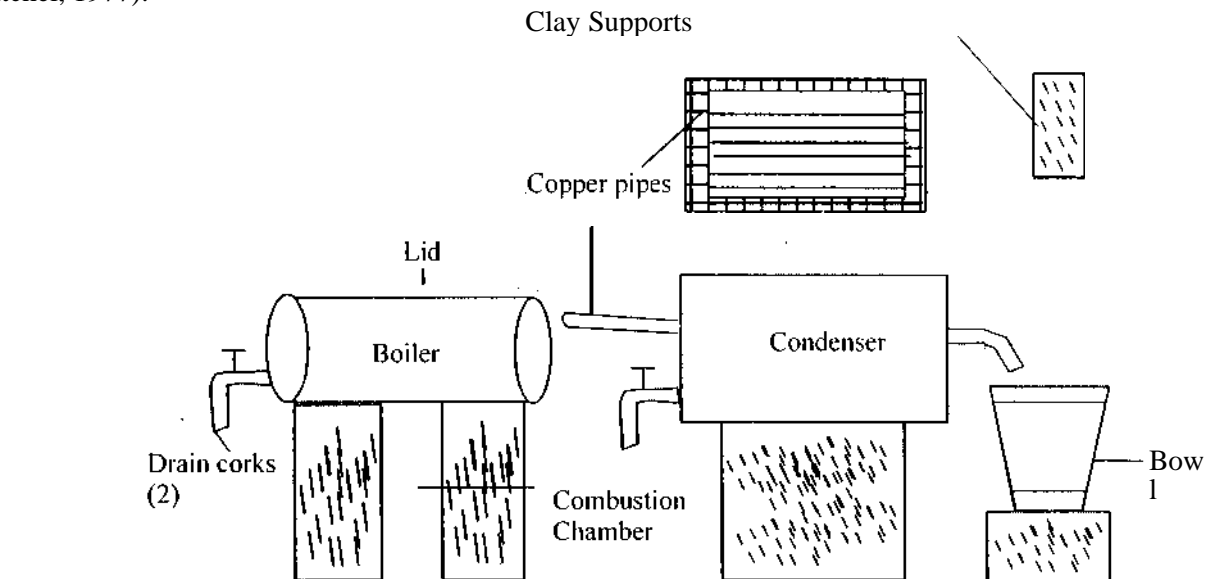


Figure 1 (Distillation Plant)

Yeast and Sugar: They are bought from the supermarkets or stores. Though palm-wine contains both yeast and sugar Ojeh (1981), it is necessary to add yeast and sugar to fresh palm-wine so as to increase the alcoholic content, which also shortens the period of fermentation; that is palm-wine without these additions attains longer period of fermentation before distillation.

Palm-wine: Palm-wine is tapped from raffia trees, it can also be tapped from palm trees. The part of the raffia tree being tapped to get palm-wine is the on-coming fresh fruits portion that is about to show up. A gourd is placed on the tapped area, ensuring that a channel is made to direct the liquid to the gourd.

This is a skilled and experienced art. In most of the locations visited, the operators (distillers) are also the tappers with few getting palm-wine supply. The distillation plant is installed in the vicinity or area where raffia trees are planted. Tapping and distilling are skills and experiences leading to an art which could be taken as an apprenticeship of up to 1 and 2 years before graduation.

Method

Preparation of the Mixture: In order to increase the alcoholic content, yeast and sugar are added to the fresh palm-wine stored in the storage tank(s). For every drum, that is two hundred litres of fresh palm-wine, 2 cups of yeast (milk can size) and 4 cups of granulated sugar (milk can size) are added. When asked why not more or less cups, the reply was that, that was the method they were taught which had given them the much needed alcoholic content in the distilled gin ("Amereka"). It was further asked if this method was in practice from the early production of "Amereka". The reply was that, it never existed in early production, but later some distillers got this idea so as to quicken the fermentation period. It appeared that most locations adhered to this method even the use of large cups fell to the quantity of both yeast and sugar.

The mixture was through stirring the palm-wine inside the storage tank when yeast and sugar is added; using a special paddle, figure 2 made for such purpose. In doing so, we convert first the

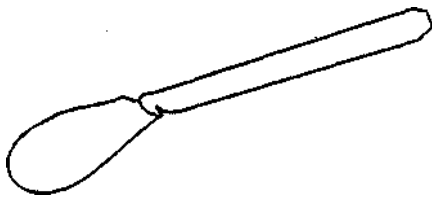


Figure 2 (paddle)

palm-wine into alcohol and carbon dioxide gas (Pearson, 1973). After the mixture, the storage tank(s) is/are sealed or covered firmly in order to retain the gas. The palm-wine acquires fermentation in the storage tank(s). Care is always taken at the stage of mixing (mixture and stirring) else explosion could occur resulting into fire hazard (Ojeh, 1981).

Collection of “Amereka”: Having satisfied that the fermentation is okay according to the laid down period, distilling comes next and is as follows:

- a. Check the boiler and the condenser to ensure they are free from dirt;
- b. Ensure that logs of wood are adequate;
- c. Ensure that all necessary safety precautions are observed and put in place;
- d. Fill the condenser with cold water ensuring that the water covers the copper pipes and reaches the top of the condenser. Check for leakages and place the bowl in the pipes spouts;
- e. Set the log of wood properly inside the combustion chamber;
- f. Carefully fetch the concentrated liquid (palm-wine) in the storage tank(s) into the boiler to the level. Close the opening through which the boiler was filled carefully and check for leakages and

- g. Lit up the log of wood in the combustion chamber directing the source of fire flame to the boiler.

As the flame is on the boiler, the alcoholic liquid (palm-wine) starts to boil and at a temperature of 80°C Ammer, et al (1975), real boiling of the alcoholic liquid to produce vapour takes place. The first rush of condensate (“Amereka”) into the bowl is poured back into the boiler. It is believed that this rush could contain wet particles of alcoholic vapour. This is always done for every fresh start of distillation (Williams, 1999). Distilling continues to take place till the storage tank(s) liquid content is empty and when the residue liquid in the boiler becomes water (Waugh, 1969 & Okpako, 1999). The later statement was observed through continuous consumption test of the condensate particularly if distilling is coming to an end. The taste of the condensate at this period is having no “Amereka” aroma, ordinary water. As the distilling processes is going on, the condensate starts to drop into the bowl and “Amereka” aroma fills the whole area. Collection in the bowl is poured into 25 litres jerry can and at the end, up to 10 (ten) jerry cans or less or more could be produced depending on the numbers of storage tanks.

Testing: In all the locations visited “Amereka” after collection, was not subjected to alcoholic test due to lack of equipment. The only tests carried out are based on skill and experience which could be grouped as follows:

- a. Physical Test and
- b. Flame Test.

Physical Test: The table below analysed the test as stated:

ATTRIBUTE	CONDITION
Appearance of palm-wine (colour) Palm-wine when shaken	Clear, White (milky) Clear, short-lived foam
Distilled palm-wine (“Amereka”) odour	Aromatic
Distilled palm-wine (“Amereka”) tasted	Dry and hot
Distilled palm-wine (“Amereka”) when Shaken	Clear, short-lived foam
Appearance of distilled palm-wine (“Amereka”) (colour)	Clear

Source: Consumption and participation in the distillation of “Amereka” at locations visited (1999).

Table 1

Flame Test: To determine if the distillation is of high quality, that is the “Amereka”, a flame test is carried out as follows:

- a. Pour some quantity of “Amereka” on a hard floor either concrete or clay;
- b. Get a box of matches;
- c. Strike a match and move the fire flame across the “Amereka”;

Result: A blue flame satisfies the test.

Result and Discussions

The technology of distilling concentrate palm-wine into “Amereka” in Nigeria is highly, but remotely developed. Highly in the sense that the principle of generating wet/dry steam and condensating it back to liquid is applied. Remotely developed in the sense that manual labour is very high, lack of equipment to determine the chemistry of fermentation, Waugh (1969), which is the basis in making of gin, alcohol content and many others. All it entails is skill and experience as a good distiller could have undergone an apprenticeship.

Looking at Table 1 which shows the physical characteristics of “Amereka” distilled from palm-wine have been accepted and its popularity cannot be over emphasised due to its clear and dry condition. Palm-wine “Amereka” dryness condition (hot) and the aroma when poured both to the glass (cup) and mouth compared favourably to the imported ones and those distilled in Nigeria as no odour is sensed (Obayanju, et al, 1991). Though the alcoholic content cannot be ascertained as well as its marketing bottle, but it is known to be alcoholic by the consumer; any bottle can serve for storage and for sale. “Amereka” is stored at a temperature within the environment and kept in a container with the cork (lid) in contact making air penetration difficult. Containers of “Amereka” are kept in well ventilated rooms free from strong sunshine light and far from fire flame; lying on a platform before the floor. These precautions will prevent fire outbreak and loss of alcoholic content.

“Amereka” can be served either dry or on the rocks in any tumbler, but in locations and within the Urhobos, it is served on those tumblers of long-stemmed and narrow-rimmed with deep elegant slender bowl or short curved bowl.

Maintenance; Maintenance of the distillation plant is simple and not expensive. Immediately after distillation, the residue liquid in the boiler is either drained out or fetched from the boiler. The boiler is washed with detergent/water and cleaned with rag. Same also go to the condenser. Any leakage noticed during distilling processes is sealed up. The remnant of the log of wood are removed from the combustion chamber so also the ashes. The vicinity of the distillation plant is made clean and neat preparing for the next distilling processes. The storage tank(s) are also washed and cleaned. Any leaking spots found in the tank(s) are sealed up. Any crack found in the various clay support for the condenser, collecting bow l and the combustion chamber is corrected.

Conclusion And Recommendations

The article highlighted the origin of “Amereka” and went further to discuss its production processes. The article reveals the techniques of tapping palm-wine and the two main sources of palm- wine. It went further to discuss the technology (local) associated to “Amereka” production. Finally the article is of the view that “Amereka” consumption and dealership in Nigeria is widespread as such it can be commercially exploited as other gin to earn Nigeria hard currency (Obayanju, et al, 1991).

In order that “Amereka” to stand both national and international consumption, the following recommendations were made;

- a. That “Amereka” distillers in Nigeria should form Co-operative Association or Company and get registered in order to be recognised; using laid down standards in both mixture and fermentation periods;
- b. That they should venture into using palm tree wine in the production of “Amereka” now' and compare or mixing the two brand of wine together and distill;
- c. That the alcoholic 7% content of “Amereka” should be analysed and known before selling; not more or less than 45%;
- d. That “Amereka” be sold in a well defined and known bottle with such inscriptions; “Amereka”, Distilled By Volume 75cl 45% alcohol. Approved By(Govt. Agency);
- e. That government should encourage production of “Amereka” while distillers should cultivate both raffia and palm trees.

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