

Rice Wine in Southeast Asia Countries : Thailand, Laos, Vietnam and Myanmar

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The traditional alcohol beverages produced in Southeast Asia are broadly classified into (1) rice and cereal wine, (2) palm wine, and (3) distilled spirit from rice, cereal, or palm wine. Rice wine is said to originate from Yunnan-Guizhou provinces of China. Thus, the brewing methods of rice wine and drinking customs is suggested to spread as concentric cycle from this area into the surrounding areas. Basically, the common method of making rice wine is as follows: powdered starter (*ragi*, *lakpaeng*, *bubod*, *men*, *mochikouji*) is spread on steamed rice, ferment them in a wide-mouthed jar for saccarifying process, and transfer into narrow-mouthed jar for alcohol fermentation. In some places, rice chaff is applied. When rice chaff is added during fermentation process, long fine bamboo straw is usually used when drink the product.

Although, Southeast Asia lies in the tropical zone, which rich in many varieties of fruits, fruit wine could not be found in this area. Palm wine from the sap of palm trees is considered as the fruity wine in Southeast Asia.

Nowadays, the distilled spirit from rice or palm wine is a more popular traditional alcohol beverage than its origin (rice or palm wine) in Southeast Asia area. From our survey in the north part of Vietnam, Laos, and Myanmar, rice wine has been switched to distilled spirit of rice or

palm wine. Unique and traditional distillation method still be used in this area.

1. Brewing alcohol beverage in Southeast Asia is origin from Yunnan-Guizhou provinces of China

It is the common knowledge that on the basis of making process, alcoholic beverages are divided into three broad categories; brewing alcohol beverages (wine, beer, sake, *etc*) distilled spirit (whisky, brandy, vodka, tequila, *etc*), and mixed of brewing and distilled spirit (liquor, vermouth, *etc*). Furthermore, brewing alcohol beverages could be divided into two categories on the basis of fermentation processes; single fermentation process (wine) and combination fermentation process (beer and sake). Wine can therefore be made by the direct fermentation of the raw material, while the production of beer or sake requires the hydrolysis of starch to yield sugars fermentable by yeast, as a preliminary step.

In Southeast Asia (SEA) area, it is assumed that we could find many kinds of fermented fruits like wine, because this area is abundant in many kinds of fruits that contained high sugar concentration. However, in the reality, except of palm wine and banana wine, it is difficult to find alcoholic beverages made from fruit juices in this area. In Luzon Island, the Philippines, we could find *basi*, a wine from press juice of sugar cane. However, *basi* was only produced in the certain area, and did not wide-spread consumed in Asia continental and island area. From our survey on the study of alcohol beverages in Southeast Asia, we found many fruits liquor (dipping the fruits in distilled alcohol), but we do not found fermented fruit juices. Our survey is similar with the investigation of Dr. Naomichi Ishige, staff of National Museum of Ethnology, Osaka, Japan on the study on the comparison of food culture of SEA peoples. He reported that there is no full-scale production of fermented fruit juices in Southeast Asia.

Even, there are no full-scale of fermented fruit juices production in Southeast Asia, as living on rice people, from long time ago, there are fermented cereals and fermented rice in the area.

From Nepal to Sikkim area (the North of India), *chan* (brewing alcoholic beverage) has been made among farm household. The processing of *chan* is as followed: directly ferment the steamed millet or corn with starter without water addition. This kind of solid fermentation process is called as *tsubu sake* (grain wine). It is assumed that *tsubu sake* was the oldest process of alcoholic beverages making and the oldest method of solid fermentation. In addition, because this area famous by their cereals production, the cereals wine is the famous product of this area.

However, the route of spreading of rice wine is unknown. The origin of rice was suggested from the area of the middle of Chan Jiang River in the Yunggui area (Yunnan-Guizhou provinces) of China in 4000 years ago. Together with the distribution of rice, the culture of making rice wine spread from Yunggui area to SEA, as concentric cycle. Because of the religion, some area of Southeast Asia, like Indonesia and Malaysia, did not develop the rice wine. Leastways, we suggested that rice wine is originated from the Yunggui area (China).

Unfortunately, from our several times survey, currently, there is no more production of brewing alcohol beverage from cereal or rice in Yunggui area. Alcohol beverages that available in the market of this area are *shochu* (distilled spirit).

2. Rice and Cereals wine in SEA

As mentioned in the previous section, the methods and custom of drinking alcohol in SEA is said, were come from Yunggui area of China as an origin. Yunggui area is divided into two provinces, namely Yunnan and Guizhou area. In Yunnan province, there are about 30 minorities and in Guizhou area, there are about 15 minorities. From our survey several times in Yunnan, we found that Bai, Dai, Jinpo, and Nazi ethnic minorities of China make alcohol beverages from rice. In the farm householder, who makes rice wine, simple ceramic distiller for making distiller spirit or unrefined rice wine is equipped in their house. From our visit, every 1 or 2 farmer is equipped with a unit of making alcohol beverages.

In the village which making cereals wine, the materials used for making cereals wine is usually rice. However, Miao Minority in Kummin (capital city of Yunnan) used corn, red-corn, or barley in making cereals wine, instead of rice. Furthermore, the ethnic minorities of Red Zao, Zai, Kumong in North Vietnam, in every farmer house, which make rice wine, were equipped with distiller.

On the other hand, the people of the tribe of E de, Mnon, and Coho in South or central west side of Vietnam, usually make rice wine, and drink in traditional way when festivals.

In other SEA area, for example Lao tribe in Laos, Lao-tai tribe in North Thailand, Ifugao tribe in Philippine, and Bali people in Indonesia, rice wine are also be widely produced. Because of rice wine is the product of the certain tribes or people and not full-scale production, the distribution of rice wine is local and spot.

3. Method for making cereals wine

Generally, the method for producing cereals wine in Southeast Asia is as followed. Wash the rice, immerse the washing rice in water for 1 hour, and steam it. Spread out on cloth for cooling down the steamed rice to room temperature. Disperse the amount of starter. Starter contains *Rhizopus* which have the ability to decompose amylase and *Sacharomycopsis* which have the ability to promote alcohol fermentation. Transfer the steamed rice spread with starter in wide-mouthed Chinese jar and place it at room temperature for 1 or 2 days. In the continental of Asia, they mix steamed rice with chaff. By the way, rice wine from Bali island, *brem*, and from Luzon island, *tapuy*, did not be added with chaffs.

From our survey, traditional rice wine from the continental and the islands of Asia have differences on the adding of rice chaff. There are also some places, after first stage of fermentation, they added chaff again, and transfer this moromi to other narrow-mouthed jar. Then, fill up the mouth of jar with chaffs, place banana leaves, clothe with plastics or papers, tie up tightly with lace, and ferment it at room temperature for 1 month. When drink, get out of the chaff, add with water, leave for 1 h, and suck

with long fine bamboo straw. To filtrate the rice grains or chaff, small hole or slit is incised at the edge of long fine bamboo straw. If one jar of wine was opened, in this day, it should be finished. Figure 1. present the general method of making rice wine in SE Asia.

Rice powder → adding with herb or ginger → forming and shaping to ball or square → fermentation → starter

Rice or Cereals → washing → immersing on water → splashing the water → steaming for 1 hour → cooling down → spreading the starter → first stage fermentation (saccharifying) → transferring to a new jar → second stage fermentation → aging → rice wine

Fig. 1 Basic procedure for making starter and rice or cereals wine

4. Characteristics of traditional rice wine

The rice wine in SEA has the characteristics as follows:

1. The raw material for making rice wine is paddy, red or white glutinous rice, or ordinary rice.
2. The starter used for making rice wine is the small rice powder ball mixed with molds, yeast and bacteria.
3. Chinese ceramic jar is usually used as container for making rice wine.
4. During fermentation, rice chaff has been applied or not.
5. The fermentation process of rice wine is conducted in one or two jars.
6. The manner of drinking is traditionally used fine bamboo straw without filtration.

From the above characteristics, we found the application of rice chaff in fermentation process is unique and differed between the places and

peoples. There are four way of making rice wine in accordance to application of rice chaff (Fig. 2).

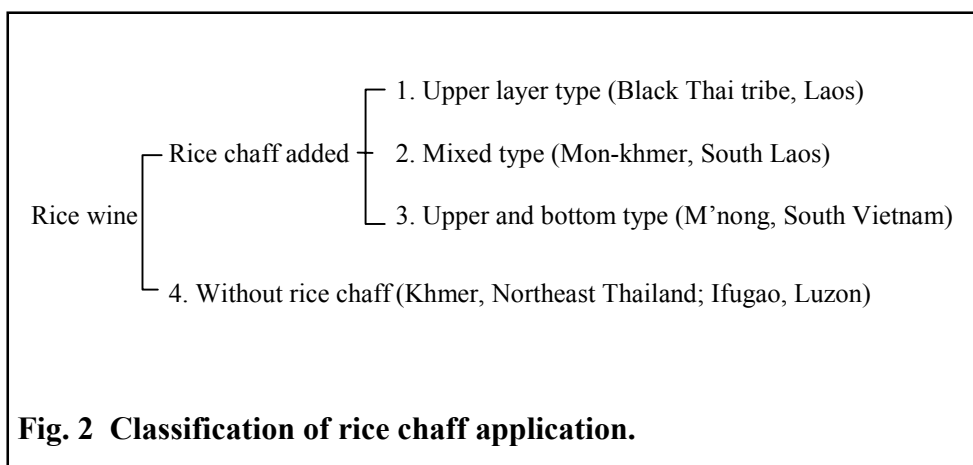


Fig. 2 Classification of rice chaff application.

5. Other traditional brewing alcohol in SEA

SEA countries located in the belt of the palm culture, and the ratio of application of palm is extremely high than other plants. Palm wine was made broadly in SEA region. Main varieties of palm, which used for palm wine making, are sugar palm (*Arenga pinnata*), palmyra palm (*Borassus flabellifer*), coconut palm (*Cocos nucifera*), and nipa palm (*Nypa fruticans*). Coconut palm grows near river or sea side, nipa palm was found frequently in brackish water, and palmyra palm grows in warm climate inlands. The process of making palm wine is simple and well known. Oozed sap from palm are collected in bamboo tube, the volume of oozed sap from palm can be reached until 50-60 ml/h. Bamboo tube using for collecting is adhered by many yeasts and lactic acid bacteria. So alcohol fermentation already started while bamboo tube was hung in the cutting inflorescence. Palm wine include about 2% ethanol. Collecting of palm wine is mostly distilled by simple method in the farmer houses. The distilled spirit from palm wine is the main alcohol beverage in SEA region. And from palm wine, they make palm brown sugar. Same as rice wine, palm wine was distilled to be distilled spirit, contained high

concentration of alcohol. In the palm wine making, if they did not do carefully, insects will come in, and the palm wine will become sour.

In Luzon Island of the Philippine and in Annamese Cordillera of Central Vietnam, some farmer makes sugar cane wine for own consumption. In the Philippine, it is called “*basi*” and in Vietnam it is called as “*abieta tau*”. The making place, the product, and the consumption of sugar cane wine are very limited in SEA.

From our survey, we found that generally, cereals wine are made by the minority people, but palm wine are made by general people.

6. Distilled spirit from rice wine in SEA region

Rice wine was made by ethnic minority houses of South Yunnan province in China until 15 years ago. However, nowadays, rice wine is all almost distilled. By way of distillation, distilled spirit from rice wine can be storage longer, easier for transportation, and has higher alcohol concentration content than brewing rice wine. Because of these reasons, the rice wine is shifted gradually by the distilled spirit.

Almost the minorities live in the border area between Yunnan and countries of SEA, Vietnam, Laos, and Myanmar, made distilled spirit from rice wine. Red Zao tribe in the north Vietnam near Yunnan use the whole paddy for making wine. They called their paddy wine as “*bong ruou*”. According to the explanation of farmer, the method for making “*bong ruou*” is as follows. Steam the dried paddy for 1 hour and cool them. Spread 1.5 kg “*men*” (starter) to 30 kg steamed paddy. In order to saccharification, pile the paddy and cover them by cotton cloth, and leave for 2 days in the room. Transfer the sweetening paddy to drum and ferment for 15-20 days. After fermentation, rice wine is distilled by the East Asian type distiller. The procedure of making “*bong ruou*” is shown in Fig. 3.

Paddy → sun dry → steaming (1 hr) → cooling → spreading “*men*” → piling → leaving (2 days) → transfer to drum → fermentation → distillation → “*bong ruou*”

Fig. 3 “*Bong ruou*” making

Inder tribe live around Inde Lake in Myanmar, are well known of making distilled rice wine and it is called as “*aie pyu*” (aie=alcohol, pyu=white). Generally, local people used crunch rice as raw materials for making this rice wine. After quick wash, the crunch rice were steamed for 60 min, spread on bamboo mat for cooling, and spread 55 pieces of starter ball (1 pieces=15 g). After that, put while push the rice into jar and ferment them for 6 days. After 6 days, mix with a bucket of palm brown sugar solution and continue 4 days more fermentation. The product of rice wine was distilled by western type distiller. The taste of this alcohol beverage is sweet, a little bitter, and contained about 50% alcohol. If the farmer sale this distiller spirit to the market, they diluted the product into 40%. Procedure of “*aie pyu*” making are presented in Fig. 4. The starter used for making “*aie pyu*” was called “*garse*”. The making process of “*garse*” is shown in figure 5.

Crunch rice → steaming (1 hr) → cooling → spreading of starter ball (55 pieces/60 kg rice) → transferring to four jars → first fermentation (6 days) → adding palm sugar solution → second fermentation (4 days) → distillation → product (±50% alcohol) → dilution (35-40% alcohol)

Fig. 4 “*Aiu pyu*” making

Glutinous rice → washing → steaming for 1 h → pounding → shaping → place on rice chaff → spread old starter powder → inoculation with molds → sun drying → product

Fig. 5 “*Garse*” starting making