

“SHAPING THE LOCAL COMMUNITY COLLABORATION VIA TRADITIONAL BEVERAGE “AIRAG””

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Abstract: Airag, known also as kumis or tsegee, is a fermented mare’s milk, which has been originally a traditional drink of nomadic peoples in the steppe region of Eurasia from ancient times. Due to the recent sedentarization occurring over Eurasia, it became difficult to find the airag produced by the traditional method outside of Mongolia, where nomadic pastoralism is still active in the countryside. Thus, we started to document the traditional airag production method since 2012 in Mongolia to finally disseminate it nationwide, as the nomadic pastoralism is under threat of extinction under the market economy after the end of the socialism era in the 1990’s (e.g. Bat-Oyun et al., 2015, 2018). The traditional method of airag production that remained in the countryside of Mongolia is a very important heritage of nomadic pastoralism. With this background, we are preparing to make an exhibition of airag in the museum of the Mogod county of the Bulgan province in northern Mongolia. Mogod is one of the most famous counties for producing high quality airag. The exhibition of museum aims to function as a platform for eco tourism of nomadic pastoralism that will help boost the local economy in the future.

Keywords: agricultural heritage, airag (kumis), nomadism, museum, eco-tourism

Introduction

Airag (fermented mare's milk) is a traditional milk product in Mongolia. While its production has been industrialised in the other countries such as Russia, China, Kazakhstan and Germany, traditional knowledge and skills are maintained in Mongolia as part of local community and individual heritages. The growing interest in healthier foods has increased demand for *airag* owing to its values of both a non-cow dairy product and a fermented food within and beyond Mongolia. It is therefore vital to document the knowledge and skills of how traditional *airag* is produced in Mongolia to transfer it to the next generation.

As a symbol of nomadic pastoralism, *airag* is attracting people, not only for its taste and medical effect, but also as an agricultural heritage, conservation of biodiversity, practice of animal welfare, sustainable development in rural area, and so on (Morinaga, 2019). As *airag* is a fresh fermented product and difficult to transport to distant places and cities, we started to plan an eco tourism project which guides tourists to a countryside where *airag* production and culture are still alive. Since 2012, we have been investigating the *airag* production, and these scientific findings and documentations will be used as the core resources for the eco tourism. The *airag* tourism aims to help protect the heritage of its culture as well as boost the rural community building in the future. For the first step, we are preparing an exhibition of *airag* in the museum of the Mogod county of the Bulgan province in northern Mongolia. Mogod is one of the most famous counties for producing high quality *airag*.



Picture 1. Mogod museum is located in the culture center building at the center of Mogod county, Bulgan province.

Literature review/research gap

There exist various themes in eco tourism (Sirakaya et al.,1999). Here, our *airag* eco tourism is considered as “food tourism” which is defined by Hall et al.(2003) as visitation to primary and secondary food producers, food festivals, restaurants and specific locations for which food tasting and/or experiencing the attributes of specialist food production region are the primary motivating factor for travel. They mentioned that food tourism offers so much potential to reinforce local food economies, encourage the conservation of food and biodiversity, and help sustain local identities (Hall et al, 2003).

As for *airag*, most of studies have been conducted on its contents and health benefit to human. For instance, *airag* contains a lot of vitamins and minerals to recover strength (e.g.Konagaya, 2005,Abdel-Salam et al., 2010). Though scientific research of *airag* has started in Mongolia since 1960's (Baldorj, 1967), most of them are published in Mongolian and thus they are not well known to foreign researchers. Presnetly, the growing number of research has been made of *airag* on the nutrition study abroad. Only a few papers, however, cite those works written in Mongolian language. To confirm that *airag* is an important Mongolian heritage, it is necessary to introduce those early works done by Mongolian researchers.

Methods

1. Carry out an interview in Tuv Province which is close to Ulaanbaatar city into needs of the museum exhibition of *airag*.
2. Prepare the *airag* exhibition in Mogod museum using our past and ongoing research results about *airag* as posters in Mongolian and English.
3. Collect the equipments for *airag* production for the exhibition in Mogod museum.

Conclusions

1. In order to survey the needs for *airag* exhibition in city, an interview was carried out in Batsumber county, Tuv province, during 15-23 July, 2018 for 490 people of 3 age groups. The study has revealed that not sufficient information on *airag* were shared among people, and people require to protect traditional methods of *airag* production as a cultural heritage, and they want to get information about *airag* by various media such as TV, radio, video, films, school programs, published materials and museum exhibitions (Chimgee et al., 2018).
2. For the first step, the following results of our researches were chosen for the exhibition in museum as poster presentations.

- 1) Review of past *airag* studies in Mongol. The interview to Dr.Baldorj's family about their *airag* research at National University of Mongolia was carried out on 30 May, 2019.
- 2) Nationwide *airag* production map (Bat-Oyun, 2015, Fig.1). Through the Mongolian meteorological network, this was the first survey on *airag* targeting 2045 herders in 2012. We compared *airag* production between households producing it and total households. Results revealed intensive production in central Mongolia, but less in surrounding areas, except along the western border. High horse density in the central steppes and forest steppes provides an eco-climatological explanation, but this density pattern cannot explain inadequate production in eastern areas. Thus, culture and ethnicity may account for *airag*'s regionality.
- 3) *Airag* production method was documented by interviews and observations at Mr. N. and Mrs.U.'s yurt at Mogod county in summer of 2013 and 2014. In 2013, They were making *airag* from June 25 to September 22 every day. The frequency of milking was 1-8 times a day, and the total amount of *airag* throughout the summer was 5139 liters using about 50 horses. The housewife of the yurt was adjusting the taste of *airag* through the management of temperature condition, ratio of starter and mare's milk, mixing hours, and so on (Morinaga et al.,2018).
- 4) In order to collect the samples of *airag* and mare's milk for analysis of various properties, we held an *Airag* Festival on 4th August, 2016, and fifty-one samples of *airag* were exhibited in the contest. At the same time, a questionnaire about



Picture 2. Interview to Dr.Baldorj's family. From left, Dr.Bat-Oyun, Dr.Namsrai (Dr.Baldorj's wife,), Dr.Ochirhuyag (Dr.Baldorj's son, vice president of NUM), Prof.Chimgee (Photo by Purevdorj)

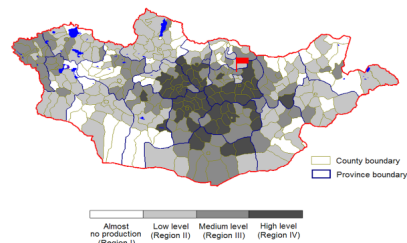


Fig. 1 Airag production map. White star indicates Mogod county in Bulgan province. Black circle indicates Batsumber county in Tuv province.



Picture 3 Traditional container called hujur made from cow skin (left) and new container made from plastic in Mrs.U.'s house in Mogod county, 2013.

airag production method was carried out to the participants. Each sample of *airag* was scored 1 to 5 points by five judges. The median value of the five judges in each exhibit was adopted as the score. To determine the elements that influence the quality of *airag*, physical and chemical properties such as EC (electric conductivity), pH, Brix (sugar), and some minerals (Ca, P, S, K, Na, Mg) of 51 samples were measured using EC meter, pH meter, refractometer and ICP-MS (inductively coupled plasma mass spectrometry). For finding the properties that contribute most to the score, they were analyzed by CART (Classification And Regression Trees) and it was shown that relative high EC values lowered the scores of the *airag* (Tsuchiya et al.,2018).



Picture 4 A newly made hukur for museum display. 22 March, 2019

3. Equipment for traditional *airag* production is collected. *Hukur*, the traditional container for stirring and fermenting *airag* is made from cow skin, was made by Mr.Sukhbaatar in Mogod county for display in the museum in March, 2019 (Picture 4). The method to make the *hukur* was recorded by video.

Implications

Platform for eco tourism The exhibition of *airag* in museum will transfer the knowledge of nomadic tradition, and is expected to contribute to sustainability education for school children, city dwellers, and also for tourists from abroad. We will plan to have events to introduce the method of *airag* production (raising horses, milking, making starter, fermentation of mare's milk, and so on) by local people to tourists at the museum.

Manual for *airag* production We will produce a manual for *airag* preparation based on the questionnaire data. The prepared manual will be useful to transfer and improve herders' knowledge and skill on *airag* production. Improved *airag* production will lead to a promotion of local economy, elaboration and sustainability of livestock industry. It will lead to the achievement of SDGs especially Goals 1,3,8,11 and 15.

Limitations

We need to get fund for expanding the display and for administrating the museum. We also need to find local people such as herders, school teachers, etc., who could collaborate with us to make the museum as the platform of eco tourism.

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