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IDENTIFICATION AND FARMER FAMILY'S PREFERENCE OF INDIGENOUS FOOD IN RURAL BENGKULU

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Abstract

These traditional foods have nutritional value and more specific taste. These foods use the ingredients obtained from the local food sources and they have the taste which is relatively acceptable for Bengkulu people. Purpose of this research was to identify the kinds of traditional foods, preferences in the consumption pattern in the family of farmers. The data collection method used a combination of quantitative and qualitative techniques such as indepth interviews and Food Frequency Questionnaire . FGD was performed on each ethnic group, and the members were mothers who understood the traditional foods consumed by people in the related ethnic group and they resided in the ethnic group. The identification of traditional foods is obtained from FFQ (Food Frequency Questionnaire). Most of the food sources of vegetables consumed by the community were vegetables that many people got from rice fields/dryfields/ gardens Traditional food snacks, side dishes and vegetables in the agricultural households as such as *bolu semut*, *rebung asam ikan gaguk*, *guasan*, *gulai nangko*,and *gulai jamur gerigit*. Preferences for indegenous foods among different generations show preference for traditional snacks, traditional side dishes and vegetables in households. The preference for indegenous foods varied between the children, mothers and fathers.

Keywords: Farmers; Indegenous Food; Preference

INTRODUCTION

Traditional food which include indigenous food is a cultural phenomenon (Gewa et al., 2019). The traditional food is the food consumed by certain ethnic group in a specific region and continue to be a vital component of the diet. As environmental and socioeconomic changes continually challenge northern First Nations communities, the availability of traditional foods is critical to maintaining their food security (Schuster, Wein, Dickson, & Chan, 2011). The existence of traditional food is getting scarce due to the complexity of the making and that it is only known by certain group of people. Those products were probably part of a daily meal and these days they are consumed only on festive occasions (Jordana, 2000) (Sarkar, Lohith, Dhumal, Panigrahi, & Choudhary,

2015). The tendency of consuming traditional food in a family is often found during the wedding ceremony of Bengkulu people. This condition is still preserved due to their fondness and preference and also easiness to obtain. Some traditional foods of Bengkulu which are fish-based are *pendap* fish, *pais*, *lemea*, *bagar hiu*, *gulai kemba'ang*, and *tempoyak* (fermented *durian*). These traditional foods have nutritional value and more specific taste. These foods use the ingredients obtained from the local food sources and they have the taste which is relatively acceptable for Bengkulu people.

Processing of agricultural products remains the most important food and nutrition security aspect (Nkhata, Ayua, Kamau, & Shingiro, 2018). The

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processing method of the traditional food such as soaking, fermentation, and germination may increase the bio-availability of micronutrient (Hotz & Gibson, 2007). In fact that the society is having micronutrient problem, the traditional source of food can be used for improve the strategy of improving the nutrition for family with traditional food base. Micronutrient in form of iron, vitamin A and vitamin C are mostly available in traditional food (Roche, Creed-Kanashiro, Tuesta, & Kuhnlein, 2008). Eating leafy vegetables has been reported to contribute to vitamin A, C and Ca intakes when 50 g/d are consumed Cevallos-valdiviezo, & Damme, 2019). The latter highlights the importance of consuming green leafy vegetables for micronutrient intake. The switch from consuming traditional food may reduce consumption of fish, vegetables and fruits, and local agriculture product. Increasing the availability of fruits and vegetables would be well received. Information from this study provides a basis for nutrition education and food supplement programs that is responsive to the needs and perceptions of the residents. Continued traditional food intake and increased fruit and vegetable intake have the potential to benefit the health of rural residents (Johnson, Nobmann, & Asay, 2012). As the result, the micronutrient intake becomes low, another consequence is the increase of energy, carbohydrate and fat consumption.

Individual food consumption at the household level is generally influenced by many factors, including; food availability, type, and amount of food in a household that usually develops from staple food locally or from food that has been planted (Hotz & Gibson, 2007). Many of these concepts are contextualized from childhood. In addition, the sociocultural factors of the local area also influence the food consumption patterns of the community, including the types of food that must be produced,

how to process, distribute, prepare, and serve food (Hotz & Gibson, 2007). A study in Iran, found that serve as guideline to design socio-culturally appropriate strategies and improve dietary behaviors of Iranians (Roudsari et al., 2017). Meanwhile, food choices or preferences are generally determined by the factor of acceptance or rejection of food by individuals or populations (Colozza & Avendano, 2019). The choice of food preference for individuals and households is generally influenced and formed from a combination of genetic and environmental factors. Meanwhile, food preferences and parental eating habits provide great examples of opportunities in shaping food preferences and eating habits for their children (Scaglioni, Arrizza, Vecchi, & Tedeschi, 2015). The pattern of food consumption is defined as the composition of the types and quantities of food consumed by a person or group of people (Mahmudiono, Sumarmi, & Rosenkranz, 2017).

Personal factors (including taste indicator, emotion, personality), biological psychological factors (including age indicator, gender, and psychological influence) and also intrinsic factors (taste, aroma, appearance, and quality of food) give significant influence to the preference in choosing and consuming traditional food (Bartkiene et al., 2019) (Park, Hongu, & Daily, 2016). The consumption of traditional food is found more often among males and it increases in accordance with the age among both males and females (Schuster et al., 2011). Besides that the pattern of traditional food consumption is highly influenced by the season and the availability of foodstock, as an example, bagar hiu can be made when a fisherman catches a pigeon shark or horn shark because the smell of these kinds of shark is not too fishy and the skin is softer than other kinds of shark. The indegenous food called tempoyak is the result of durian fermentation which has acidity and distinct aroma and is often consumed by the people during the *durian* harvest season. Bengkulu as a agriculture area is rich in the diversity of distinctive fish based food. This research uses FGD method because traditional food types based on side dishes, snacks and vegetables have never been identified especially in agriculture area. Due to the diversity of traditional food in Bengkulu Province, an identification of kinds of traditional food consumed must be done. In this study to identify the kinds of traditional food, and preference in the family of farmers in Bengkulu.

METHOD

This study was carried out in three different regions from Bengkulu province (Indonesia). Data collection in the field was started by implementing focus group discussion (FGD) conducted in 3 (three) sample tribes. FGD is done to compare traditional foods in each ethnic. FGD was performed on each ethnic group, and the members were mothers who understood the traditional foods consumed by people in the related ethnic group and they resided in the ethnic group areas.

Each mothers revealed what they knew about types of indigenous foods, when the foods were commonly consumed by people, how to process them, how to serve them, what foodstuffs that were used and how to get the traditional foodstuffs. What was asked in the FGD was closely related to the things the mothers did in their daily lives, thereby the mothers involved in FGD were very enthusiastic to tell what they knew about these traditional foods. FGD results became the basis for the research team to develop the questionnaire related to traditional foods; i.e. the data concerning frequency of traditional food consumption, preference of traditional food and frequency of traditional foodstuffs consumption. The diversity of types of food and traditional foodstuffs in each ethnic group caused difficulties in questionnaire development and when it was asked to the respondents. Data frequency of traditional food consumption, preference of traditional food. It took about 20 minutes to collect the data on the first day from one sample. The indegenous foods identified cover the variety of snack, side dishes, and vegetables. The data of the traditional food consumed by the family will then be sorted into 5 kinds of the most often consumed traditional food. The preference of indegenous food is the level of favorite to the traditional food consumed.

Ethical approval was obtained from a local ethical committee of Public Health Faculty, Diponegoro University, No.31/EC/FKM/2017. Informed consent was given to all participants.

RESULT AND DISCUSSION

1. Indegenous food Serawai Tribe

Table 1. Identification Of Food Types Of Snack, Side Dishes And Vegetables That Are Often Consumed By The Serawai

Types of		Household	l members	
food	Mothers	Father	Child	Grandmothers
Snacks	- Bolu semut	- Lepat binti	- Kue tat	- Kue Satu
	- Kue tat	- Bolu semut	- Apam	 Kue talam
	- Lemang tapai	- Kecepul	- Bolu semut	- Kue tat
	- Juada keghas	- Kue tat	- Lepat binti	- Lemang tapai
	- Lepat binti	- Apam	- Lepat ubi	- Lepat ubi
Side dishes	- Rebung asam ikan	- Bagar ayam	- Tempoyak ikan	- Guasan
	gaguk	- Gulai ikan terong	mungkus	- Ikan pais
	- Tempoyak ikan mungkus	- Ikan masak tempoyak	- Gulai ikan undok tegrung	- Tempoyak ikan mungkus
	- Gulai ikan undok tegrung	- Gulai ikan rebung asam	- Rebung asam ikan guguk	- Gulai ikan undok tegrung
	- Ikan pais	- Gulai botok	- Ikan pais	- Rebung asam
	- Guasan		- Guasan	ikan gaguk
Vegetables	- Gulai nangko	- Gulai nangko	- Gulai nangko	- Gulai jamur
	- Gulai jamur	- Tumis pucuk	- Rebung asam	gerigit
	gerigit	lumai	manis	- Gulai kembang
	- Tumis pucuk	- Umbut manis	- Gulai jamur	- Gulai nangko
	lumai Î	- Gulai jamur	gerigit	- Rebung asam
	- Umbut manis	gerigit	- Tumis pucuk lumai	
	- Rebung asam manis	- Rebung asam manis	- Umbut manis	- Sambal unji

Traditional food represents the identity of ethic culture and food tradition that developed by many generations (Sharif, Nor, & Zahari, 2013). Traditional food types in this study are divided into three major groups, namely, snacks, side dishes, and vegetables. Indegenous vegetables are processed for daily consumption and can also be found in treats during big events such as weddings. The traditional types of vegetables consumed by the Serawai tribe include umbut (coconut umbut and palm umbut), gerigit mushrooms, kembaang, lumai, unjiterung (purple egg plant and green round egg plant) and bamboo shoots (sour bamboo shoots, sweet bamboo shoots and lemea) (Tabel 1).

Umbut is the youngest part of the palm/oil palm stem. Then it is processed in cononut milk added

by complete spices except chilly. It is soft and tastes sweet. It is a special treat in a party or charity celebration. Thus, oil palm trees are cut down to be taken their *umbut* when there is a party and charity celebration. One of the informants stated "But now umbut curry is rare to find in the community, umbut curry can be found when there is a party"

Gerigit mushrooms are fungi that grow on dead logs. the color is blackish gray, usually preserved by drying with the help of sunlight. Bitter mushrooms are processed with a mixture of fresh fish or smoked fish, in coconut milk added by complete spices. The gerigit mushrooms are usually obtained by the community from buying in traditional markets.



Picture 1. Gerigit Mushrooms

Other indegenous vegetables that are widely consumed by the Serawai tribe are kembaang, unji, lumai and terung. In the past, these vegetables were obtained by people from the forests around the Serawai settlement, but at the moment these vegetables are rarely found around their settlements, so they get more traditional vegetables from traditional markets. Kembaang is a large taro stem, processed in coconut milk added with various kinds of spicy ingredients and a daily serving in the Serawai tribe households. One informant stated "Kembaang stems are usually taken from the garden but at this time the taro stemsare rare". Unji vegetables are a part of the flower which is consumed by cooking in spicy coconut milk or processed in the form of unji chili with a mixture of cung (cherry tomatoes). Lumai is a green vegetable with bitter taste and processed with a mixture of spicy coconut milk or without chili. Eggplant is also a vegetable typical of the Serawai tribe, which is processed by using spicy ingredients which are similar to those for making rendang or processed in curry with a mixture of fresh fish. Eggplant serving were always found in every dish of charity events in the Serawai tribe.

One of the traditional food ingredients with many forms of serving is bamboo shoots. Acid bamboo shoots are thinly sliced bamboo shoots and fermented for 3 days so that the sour aroma arises, processed with spicy coconut milk with a distinctive aroma. Sweet bamboo shoots are thinly sliced bamboo shoots and then boiled. Sweet bamboo shoots are cooked with coconut milk without chili with a soft and savory flavor. Whereas *lemea* are crushed bamboo shoots and fresh fish which are fermented for 3 days. *Lemea* is one component added to fish curry (Tabel 1).



Picture 2. Bamboo Shoots

The Serawai people are also used to consuming snacks. Most of the snacks they usually consume are in the form of traditional snacks, such as *bay tat*, *cucur pandan*, *ceucun*, *lepat binti*, *juada keghas* and

lepat ubi. In addition there are two kinds of food which come from processed white sticky rice called *lemang tapai* and *serawo*. *Lemang tapai* is sticky rice cooked in bamboo with fire from firewood, cooked to

become *lemang* (sticky rice). *Lemang* is consumed by adding fermented black sticky rice. *Serawo* is a food consisting of a mixture of sticky rice, cooked coconut milk added with brown sugar. If it is in *durian* season, when you cook the *serawo* coconut milk and brown sugar, *durian* fruit is added so that the aroma and taste of the sauce will be more delicious and fresh. *Serawo* is a dish at the Serawai tribe (family and community meetings for planning the wedding procession) and is usually found as food to break the fasting month of Ramadan. One of the informants stated that "*Serawo is usually served during wedding preparations*".

One of the typical snacks of the Serawai tribe is bay tat. Bay tat is made of a mixture of wheat flour, granulated sugar, chicken eggs and butter. In processing this cake we must have special skills and it must be done by experienced people because mixing dough is done little by little and by hand. This cake usually consists of a large and small size, a large rectangular size and above the cake is decorated with grated coconut mixed with brown sugar which aims to sweeten the appearance and add to the pleasure of taste. Small tat cakes are decorated by inserting core material into a cake that is made about the size of a hand grip. In general, these cakes were often found in the society during celebrations such as weddings or major Muslim holidays.

2. Indigenous food in Rejang Tribe

The Rejang tribe is one of the oldest ethnic groups in Sumatera. The Rejang tribe dominated the Rejang Lebong rural, Kepahiang rural, Bengkulu Tengah rural, North Bengkulu rural, and Lebong rural. The Rejang tribe community lived from agriculture in rice fields and dry fields. They grew rice, vegetables and fruits. Their residential land was also fertile for coffee, tea, pepper and so on. In the community prioritized this agricultural livelihoods through cutting and burning mobile cultivation. The form of kinship of the Rejang tribe was extended family called tumbang. Between one tumbang and certain tumbang there was still a relationship petulai (brothers) and is referred to as a group of one ketumbai or sukau. Some ketumbai or sukau dwelled in a sadei (village), likewise with the Rejang tribal community who reside in Jambu village, Bengkulu Tengah Regency. The village was located in the hilly area so most of the people depended their lives on rice fields and dry fields. This greatly influenced the eating habits of the community where the people consumed a lot of food they got from the rice fields and dry fields.

Table 2. Identification Of Types Of Snacks, Side Dishes And Vegetables That Are Often Consumed By Rejang Tribal Agricultural Households

Types of	Household members					
food	Mothers	Father	Child	Grandmothers		
Snacks	 Kue bolu Kue tat Lemang tapai Godok-godok Kripik pisang 	- Kue bolu - Kue tat - Godok- godok - Kripik pisang - Juada	 Kue bolu Kue tat Godok- godok Kripik pisang Culik gigi 	 Lemang tapai Kue bolu Kue tat Lepek ketan Juada lembut 		
Side dishes	- Tempoyak ikan nila - Gulai ikan lemea - Lapen monok - Rendang monok - Pucuk	lembut - Gulai ikan undok tegrung - Tempoyak ikan mungkus - Ikan pais - Rebung asam ikan gaguk - Guasan	- Gulai ikan lemea - Tempoyak ikan nila - Lapen monok - Rending monok - Pucung	- Ikan pindang - Kan tauco - Tempoyak ikan nila - Gulai botok - Gulai ikan lemea		
Vegetables	 Sambal gedang Sambal tempoyak Gulai nangko Rebung manis masak tumis Gulai poong 	- Gulai nangko - Sambal tempoyak - Sambal gedang - Rebung manis masak tumis - Gulai poong	- Sambal gedang - Rebung manis masak tumis - Sambal tempoyak - Gulai nangko - Gulai poong	 Gulai nangko Gulai umbut Sambal gedang Sambal tempoyak Gulai keladi 		

Traditional vegetables were mostly obtained from rice fields/fields in the form of *unji*, *lumai*, *kambas*, *lemea*, *umbut*, round purple eggplant, ferns, white mushrooms, leaves of taro and young papaya. Vegetables were processed by sautéing or cooked in chili sauce. Vegetable food commonly processed into chili is *unji*, young papaya, *lumai* fruit and *lemea*. *Lemea* is a food made from bamboo shoots or young bamboo which is different from most bamboo shoots. The composition consists of chopped bamboo shoots and mixed freshwater fish such as *mujair*, *sepat*, and small fish that live in fresh water. After chopped bamboo shoot whichwas mixed with the fish was

stirred, then the mixture was stored in a container coated with banana leaves and closed tightly. This fermentation process usually required a minimum of three days. After that, the mixture could be processed to be curry as a side dish eaten with rice. In the past the people of the Rejang tribe cooked *lemea* by putting lemea into young bamboo stems and adding young taro leaves and chili into it. Cooking was done by using coals (firewood). *Lemea* which was cooked in this way produced a fragrant and distinctive aroma so that the *lemea* could increase appetite of the people of the Rejang tribe who consumed it. But with the development nowadays, it was rare to find lemea

processed using the bamboo stems. One informant stated that "We used to eat vegetables from the garden and often eat lemea because it can increase our appetite".

Unlike the Serawai tribe, most food processing in the Rejang community did not use coconut milk. Foodstuffs were processed in form of *nacang* or also soup,that is, cooking by putting food ingredients into boiling water and given various kinds of seasoning which were sliced. One of the processed animal dishes cooked in this way is *pindang* fish. One of the informants stated that "The fish that have just been obtained from the river or pond is immediately cooked so that it tastes sweet". Animal foods commonly consumed were fish obtained from rivers or ponds such as fish *nila*, emas and catfish. The processing of animal dishes in the Rejang tribe community also used a mixture of *tempoyak*, but it did not use the coconut milk.

Tempoyak is prepared by mixing of durian pulp with salt and placing in a sealed container to allow 4-7 days natural lactic acid fermentation. This fermented durian has distinctive durian smell and sour taste. Fermented durian (tempoyak) is recognized as product of lactic acid fermentation, the volatile flavoring constituents of this are largely unknown due to no analysis of the volatile constituents (Neti, Erlinda, & Virgilio, 2011) (Leisner et al., 2001).

The Rejang tribe community also consumed various kinds of indegenous snacks, including tat, bolu koja, bajik, lemang, and kolak prenggi. Tat cakes were very typical in the community and could be found during wedding celebrations and holidays. At the time of the wedding the community would work together to make the tat cake where the cake was processed by burning using fire coals (firewood). Unlike the tat tat in the Serawai tribe, the tat cake which was processed by the Rejang tribe used pineapple as intikue. The pineapple was grated and sugar was added and cooked until it was dry and fragrant. The processed pineapple was smeared on top of the tat cake mixture that has been placed on top of the dough. This tat cake would be a dish for guests who came from before the wedding day began or after (Tabel 2).

Besides that, the Rejang tribe people are also used to consume *koja* sponge cake. In contrast to sponge dough in general, in making sponge *koja* cake eggs are not shaken until they expand. Eggs are only added with flour, sugar and coconut milk and added *pandan* leaves and suji leaves for green coloring and fragrant aroma. If the *durian* season arrives, the sponge *koja* cake is added with *durian* and the addition of *durian* can increase the flavor of sponge *koja* cake. *Bolu koja* is commonly found in the Rejang tribe households in holidays.



Picture 3. Bolu Koja

The Rejang tribe community also knew snack foods such as *lemang*. *Lemang* is made from sticky rice grains, which is processed into sticky rice and consumed with additional black sticky rice. *Lemang* was a typical food that was consumed by many people during the month of Ramadan.



Picture 4. Lemang

The Rejang tribe people live the type of life which is close to agriculture; therefore, the Rejang tribe people are used to consuming fruits. The fruits that were often consumed by the community include bananas, papaya and watermelons, besides that there are seasonal fruits such as *cempedak* and soursop.

3. Indegenous food in Lembak Tribe

The Lembak tribe was not much different from the Malay community in general, but in some cases there were differences. In terms of customs in general, Malay culture dominated the culture of the Lembak tribe. The word Lembak means "valley" and also "lebak", that is, land along the river and some interpreted "back", so that initially the Lembak tribe lived along the hill line and close to the river which was inland. The Lembak people called their language

the *bulang* language which still included the Malay language family.

The main livelihood of the Lembak people was planting rice in the rice fields and planting vegetables and fruits in the dry fields (gardens). The fertile land was also suitable for being used as a coffee, clove and pepper garden. Farming work was generally still done in mutual cooperation and in season. This was similar to the main livelihood of the Lembak tribe who settled in the village of Renah Semanek rural. They relied on farming activities as a source of livelihood so this also affected the eating habits of the local community. Most of the food sources of vegetables consumed by the community were vegetables that many people got from rice fields/dryfields/ gardens such as mushrooms gerigit, kembaang, genjer, taro leaves, unji, lumai, bamboo shoots, eggplants, and tebu telur.

Table 3. Identification Of Types Of Snacks, Side Dishes And Vegetables Often Consumed By Lembak Tribal Agricultural Household.

Types of food	Household members					
Types of food	Mothers	Father	Child	Grandmothers		
Side dishes	 Gulai ikan rebung asam Ikan masak tempoyak Gulai ikan terong Bagar ayam Gulai botok 	 Bagar ayam Gulai ikan terong Ikan masak tempoyak Gulai ikan rebung asam Gulai botok 	 Ikan masak tempoyak Bagar ayam Gulai ikan terong Gulai ikan rebung asam Gulai botok 	 Gulai ikan rebung asam Bagar ayam Gulai ikan terong Ikan masak tempoyak Gulai botok 		
Vegetables	 Sambal terong Sambal tomat ikan teri Gulai manis tebu telur Gulai tenawan nangu Tumis pucuk gedang 	 Gulai manis tebu telur Sambal terong Sambal tomat ikan teri Sambal gedang Gulai tenawan nangu 	 Sambal terong Gulai manis tebu telur Sambal tomat ikan teri TumisPucuk gedang Sambal gedang 	 Gulai botok Gulai manis tebu telur Sambal terong Sambal tomat ikan teri Sambal gedang Gulai tenawan nangu 		
Snacks	 Kue goyang Lemang tapai Bajek Kerupuk bumbai Lepek berisi 	 Kue goyang Juada tat Kerupuk bumbai Lepek berisi Juada lembut/keghas 	 Juada tat Kue goyang Kerupuk bumbai Bajek Juada lembut/keghas 	 Juada tat Kerupuk bumbai Kue goyang Lemang tapai Lapek abang 		

Cuisine constitutes can be said as an intangible cultural inheritance symbolizing as a local identity, such as certain procedures in processing their food, its role in community culture and governance, and recipes that are maintained from generation to generation. Nowadays, traditional food is not just talking about how to prepare, cook, serve, and preserve which concerns the culture and past history even though local food cannot be separated from ecology, legacy, culture, and environment (Mardatillah, Raharja, Hermanto, & Herawaty, 2019). According to Guerrero, traditional food or local culinary is a food product that is often consumed by a community group or served in a celebration and a passed down from generation to certain time, generation, made in accordance with recipes from generation to generation, made without or with little engineering, and has certain characteristics that distinguish it from culinary of other regions (Guerrero L, Charet A, Verbeke W, Enderli G, Biemans SZ, Vanhonacker F, Issanchou S, Sajdakowska M, Gramli Bs, Scalvedi L, Contel M, 2010). Local foods typical of regions in Indonesia have been around for a long time and still survive today so they are highly valued as a cultural heritage. The recipe used has also been handed down from generation to generation, even the way to cook it is still preserving the old way. Even though there are modifications or variations, the main ingredients and cooking procedures do not change.

Tebu telur curry was a vegetable serving that was often found in Lembak tribe households because in general people plant tebu telur in their home gardens. One of the informants stated "In towns the price of tebu telur is expensive but in this area the

plant is not bought. If we want to cook it, we can immediately pick from the garden". Tebu telur itself is a kind of flower bulb plant. Tebu telur was cooked with all seasoning ingredients without chili and diluted coconut milk. In addition, in daily servings in the Lembak tribe households, it was also often found

processed together with *gerigit* mushrooms. *Gerigit* mushroom is a small blackish-brown mushroom that was usually processed in addition to processed fish. Likewise with bamboo shoots, both sour bamboo shoots and sweet bamboo shoots were also additional food ingredients in processed fish curry.



Picture 5. Tebe Telur

Cooked vegetables which were typical and served at ceremonies, in both marriage and charity ceremonies, were *umbut*. *Umbut* which was consumed was a coconut *umbut* and palm oil *umbut* (the soft top part of coconut/palm oil trees). The *umbut* was processed with coconut milk without chili so that its texture was soft and it tasted sweet.

The Lembak tribe had a habit of serving sticky rice in ceremonies for marriage, marriage and other rituals such as the commemoration of the birthday of the Prophet. On that day the men went to the mosque to celebrate the birthday of the Prophet. They carried out berzanji (singing relegious songs) activities for half a full day. Berzanji is an activity in Aqiqah. Aqiqah is usually performed on the same day as the cukur jam-bul. The meaning of cukur jambul or potong jambul from an Islamic perspective is the very first haircut of a newborn child (Raji, Ab Karim, Ishak, & Arshad, 2017). After the midnight time the children picked up yellow rice/turmeric rice which had been prepared by the mothers in each of their respective homes. They usually called the yellow rice dish as nasi punjung. Nasi punjung was made of sticky rice which had been previously soaked with turmeric water one night. Then aromatic rice was cooked and sprinkled with a pinch of salt to make it taste savory. Then for the side dishes that were arranged on the rice were usually in the form of chicken or chicken eggs. Yellow rice/turmeric rice will be eaten together with the fathers or children who had gathered in the mosque. One of the informants said," Nasi punjung is typical of our village, we always make it if there are religious ceremonies"...

Foods of animal sources consumed by the Lembak tribe were usually originated from fish species, most of which were obtained from rivers and swamps that surrounded the village. The food was in the form of fish tanah, mungkus, pulau nila, pelus, seluang and kebaraw. The foods of animal sources were processed by giving coconut milk, which was commonly called gulai and added with seasoning to flavor enhancers. Food ingredients that were often processed in addition to processed fish were bamboo shoots, bite mushrooms, eggplant or tempoyak. Importantly, the health benefits of eating fish (and seafood in general) are not attributable simply to the consumption of marine n-3. Sea (and most freshwater) fish also contains (in various amounts) high-quality

proteins, vitamin D, iodine, and selenium in addition to n-3, cholesterol, and some other lipids (Hosomi, Yoshida, & Fukunaga, 2012).

Food patterns of a community generally come from general food ingredients and can be produced in the local area (Territory et al., 2017). The type or amount of food in an area generally develops from local foods or foods that have been planted in that place for a long time. For example in the coastal area, most of the livelihoods of the people in the area are fishermen so generally the daily food that is chosen and commonly consumed by the people in the area is a variety of marine fish because the food is easily obtained or can be produced by themselves. Likewise in mountainous areas that are generally suitable for gardening or cultivating fields, the majority of the people's livelihoods are as farmers, and will more often consume various types of vegetables or fruits compared to fish species (Territory et al., 2017).

Indegenous snack foods in the Lembak tribe were often found during wedding and charity events. The types of snacks were juada tat, juada lembut, keghas juada, sagon, bajek, and lemang tapai. In the Lembak language, juada means cake so that juada tat means tat cake which is not much different from the tat cake in the Serawai and Rejang tribes. Juada tat was also a special dish in the celebration of the wedding and the celebration of holidays. Juada lembut is the name given by the Lembak tribe for cakes which were processed like making sponge cake. Because of the soft texture of the cake, the Lembak people call it juada lembut. Likewise with the keghas juada, it was a cake that was processed resembling pastries with a hard texture and when it was cooked, it was arranged in a jar. One of the informants said, "Juada is made in mutual cooperation when there are weddings and holidays. Mothers gather to make juada". Lemang tapai was also a traditional food of the Lembak tribe. The food was in the form of sticky rice, which is added by *tapai ketan hitam* (fermented black sticky rice) which was often found during the month of Ramadan. Tapai served at functions suchas festivals and weddings. Tapai tastes sweet yet slightly alcoholic, with a pleasant, fragrant aroma. The glutinous rice or cassava is soft and juicy, and there is also some liquid (Dickey, 2005).

Preference of indegenous food in Serawai, Lembak and Rejang Tribe

Indegenous food or local culinary is a type of food that is closely related to an area and inherited from generation to generation as a part of traditional (Pieniak, Verbeke, Vanhonacker, Guerrero, & Hersleth, 2009). According to Almli et al, traditional food is a food product that used to be consumed by their ancestors and is now often consumed by presentday society (Almli, Verbeke, Vanhonacker, Næs, & Hersleth, 2011). Traditional food is formed by a developmental process that runs for many years, namely the process of adjusting between foods consumed with the types of food available and forms of activity carried out by the local community. Traditional food has been commonly eaten since several generations, consisting of dishes that match tastes, not contrary to the religion and beliefs of the local community, and made from food ingredients and spices available locally (Sharif et al., 2013) (Guerrero L, Charet A, Verbeke W, Enderli G, Biemans SZ, Vanhonacker F, Issanchou S, Sajdakowska M, Gramli Bs, Scalvedi L, Contel M, 2010).

Factors that influence food consumption are very large, and differ from one community to another community in terms of the choice of types and the amount of food eaten. Factors that influence daily food consumption are the type and amount of available food produced, income levels and knowledge of nutrition (Ventura & Worobey, 2013). Biological and psychological factors as well as the surrounding social and cultural context affects us

differently. This contributes to creating unique food preferences between individuals. On the other hand, factors such as culture and the immediate environment may also create similar food preferences for groups of people who live in the same social milieu (Vabø & Hansen, 2014) (Colozza & Avendano, 2019). There are main factors that influence the profile of food consumption, namely individual characteristics, food characteristics, and environmental characteristics. Individual characteristics include age, gender, education, income, nutritional knowledge, and health. Meanwhile, food characteristics appearance, texture, price, type of food, shape, and combination of foods. Environmental characteristics that influence preferences are season (rainy/winter) especially traditional vegetables and fruits, energy invested for harvesting due to employment employment, mobility, occupation, population movements and social level in society (Penafiel et al., 2019) (McDonald et al., 2015) (Law, Norhasmah, Gan, Nur'Asyura, & Nasir, 2018).

Indegenous food is a food that is usually consumed by certain people with a distinctive taste that is accepted by the community. To find out the preferences of the agricultural for traditional foods interviews were conducted toward each of the agricultural households in three tribes. The three tribe studied in the agricultural households consisted of the Serawai, Lembak and Rejang tribes. Traditional food groups were divided into snacks, side dishes and vegetables. The following are the results of research on traditional food preferences in the agricultural households based on tribe. N in the table is the number of people who answered the types of traditional food preferences and "n" is the number of people who answered that they loved traditional food the most.

2.1. Serawai Tribe

Table 4. Preference For Traditional Snacks Of The Agricultural Households Of The Serawai Tribe

No	Traditional Snacks	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Apam	2; 2(100.0)	28; 22(78.6)	31; 25(80.6)	30; 26(86.7)
2.	Bolu semut	2; 1(50.0)	28; 23(82.1)	31; 28(90.3)	30; 26(86.7)
3.	Ceucung	2; 2(100.0)	25; 22(88.0)	30; 26(89.7)	28; 24(85.7)
4.	Cucur pandan	2; 2(100.0)	25; 20(80.0)	28; 23(82.1)	25; 22(88.0)
5.	Kecepul	2; 1(100.0)	28; 23(82.1)	29; 22(75.9)	28; 24(85.7)
6.	Kembang goyang	0; 0(0.0)	25; 20(80.0)	27; 24(88.9)	25; 21(84.0)
7.	Kue tat	2; 2(100.0)	29; 23(79.3)	32; 27(84.4)	32; 29(90.6)
8.	Lemang tapai	2; 2(100.0)	25; 19(76.0)	26; 21(80.8)	26; 24(92.3)
9.	Lepat binti	2; 1(50.0)	29; 26(89.7)	29; 25(86.2)	28; 25(89.3)
10.	Lepat ubi	2; 1(50.0)	27; 22(81.5)	29; 25(86.2)	28; 25(89.3)

Table 4 showed the traditional snack that was favored the most by the children of the Serawai tribe family was *lemang tapai*. *Lemang tapai* is a food made from sticky rice cooked in bamboo and when consumed it is added with *tapai* made from black sticky rice fermented. The children loved *lemang tapai* because of the sweetness of fermented black

sticky rice. The traditional snack that was most favored by the mothers of the Serawai tribe family were *bolu semut*, while the father of the Serawai tribe family liked *lepat binti*.

Indegenous food has the potential to be a sustainable, economically, culturally acceptable, and diverse source of nutrition but it has not been

continuously consumed to prevent malnutrition through the diversification of traditional food-based foods (Schmid, Egeland, Salomeyesudas, Satheesh, & Kuhnlein, 2006). Traditional food provides many

nutritional benefits to the community. Besides that, it is an optimization of the use of local food that the price of food is one of the main factors influencing their food choices (Darmon & Drewnowski, 2015).

Table 5. Preference For Traditional Side Dishes Among The Agricultural Households Of The Serawai Tribe

No	Traditional side dishes	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Guasan	2; 2(100.0)	0; 0(0.0)	32; 12(37.5)	15;12(80.0)
2.	Bagar ayam	0;0(0.0)	33; 33(100.0)	0;0(0.0)	0;0(0.0)
3.	Gulai botok	0;0(0.0)	4; 3(75.0)	0;0(0.0)	0;0(0.0)
4.	Gulai ikan rebung asam	0;0(0.0)	33; 31(93.9)	0;0(0.0)	0;0(0.0)
5.	Gulai ikan terong	0;0(0.0)	33; 33(100.0)	0;0(0.0)	0;0(0.0)
6.	Gulai ikan undok tegrung	2; 1(100.0)	0;0(0.0)	38; 27(71.1)	28; 25(89.3)
7.	Ikan masak tempoyak	0;0(0.0)	34; 32(94.1)	0;0(0.0)	0;0(0.0)
8.	Ikan pais	2; 2(100.0)	0;0(0.0)	34; 27(79.4)	27; 24(88.9)
9.	Rebung asam ikan gaguk	2; 1(100.0)	0;0(0.0)	32; 29(90.6)	30; 25(83.3)
10.	Tempoyak ikan mungkus	2; 2(100.0)	0;0(0.0)	43; 29(67.4)	33; 28(84.8)

Table 5 showed the preference in the traditional side dishes of the Serawai agricultural households varied among children, mothers and fathers. The children of the Serawai tribe households preferred *ikan pais*, the mothers liked sour bamboo shoots, *gaguk* fish and the fathers liked fish cooked with *tempoyak*. The side dishes were different in their processing but the basic ingredients were processed using fish.

Table 6 showed children's preference of the Serawai agricultural households for traditional vegetables of sweet and sour bamboo shoots. Sweet and sour bamboo shoots were made from bamboo shoots cooked in coconut milk without chili. The sweet taste of bamboo shoots and processed coconut milk without chili made the traditional vegetables loved by the children. On the other hand, in regard to traditional vegetables the mothers and fathers of the Serawai tribe families liked gulai nangko (jackfruit curry) very much.

Table 6. Preferences Of The Serawai Tribal Households For Traditional Vegetables

No	Traditional vegetables	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Gulai jamur gerigit	2; 2(100.0)	28; 21(75.0)	33; 29(87.9)	29; 26(89.7)
2.	Gulai kembang	2; 2(100.0)	22; 14(63.6)	27; 20(74.1)	24;18(75.0)
3.	Gulai nangko	2; 2(100.0)	30; 26(86.7)	35; 32(91.4)	32; 30(93.8)
4.	Rebung asam manis	2; 2(100.0)	26; 20(76.9)	30; 27(90.0)	29; 28(96.6)
5.	Sambal unji	2; 2(100.0)	18; 12(66.7)	26; 21(80.8)	20; 16(80.0)
6.	Tumis pucuk lumai	2; 2(100.0)	29; 24(82.8)	33; 29(87.9)	30; 26(86.7)
7.	Umbut manis	2; 2(100.0)	27; 22(81.5)	32; 28(87.5)	27; 25(92.6)

Table 7. Preference For Traditional Snacks Among The Lembak Tribe Households

No	Traditional snacks	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Bajek	3; 2(66.7)	27; 23(85.2)	31; 30(96.8)	28; 27(96.4)
2.	Juada lembut	3; 2(66.7)	31; 27(87.1)	31; 27(87.1)	30; 27(90.0)
3.	Juada tat	5; 5(100.0)	34; 30(88.2)	33; 28(84.8)	33; 31(93.9)
4.	Kerupuk bumbai	2; 2(100.0)	29; 29(100.0)	33; 30(90.9)	29; 28(96.9)
5.	Kue goyang	3; 3(100.0)	31; 31(100.0)	32; 32(100.0)	31; 30(96.8)
6.	Kue ketan	2; 2(100.0)	27; 22(81.5)	27; 25(92.6)	28; 25(89.3)
7.	Lemang tapai	4; 3(75.0)	30; 27(90.0)	31; 31(100.0)	29; 26(89.7)
8.	Lepek abang	3; 3(100.0)	27; 22(81.5)	30; 27(90.0)	28; 24(85.7)
9.	Lepek berisi	3; 3(100.0)	31; 29(93.5)	32; 30(93.8)	30; 27(90.0)
10.	Nasi punjung	4; 3(75.0)	28; 26(92.9)	29; 27(93.1)	27; 25(92.6)

Table 7 showed the indegenous food favored taste in crackers. While the mothers liked a traditional by children and the father of the Lembak agricultural snack called *lemang tapai* household was bumbai crackers. They liked the savory

Table 8. Preference For Traditional Side Dishes Among The Agricultural Households Of The Lembak Tribe

No	Traditional side dishes	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Bagar ayam	3; 3(100.0)	33; 33(100.0)	34; 33(97.1)	31; 31(100.0)
2.	Gulai botok	0;0(0.0)	4; 3(75.0)	3; 3(100.0)	4; 4(100.0)
3.	Gulai ikan rebung asam	4; 4(100.0)	33; 31(93.9)	35; 35(100.0)	31; 29(93.5)
4.	Gulai ikan terong	3; 3(100.0)	33; 33(100.0)	34; 34(100.0)	31; 31(100.0)
5.	Ikan masak tempoyak	3; 3(100.0)	34; 32(94.1)	35; 35(100.0)	33; 32(97.0)

Table 8 showed the preference for traditional side dishes among the children of the Lembak agricultural households, namely *gulai ikan terong* (eggplant fish curry) and *bagar ayam* (chicken *bagar*). While the mothers and fathers of the Lembak tribe households liked almost all of the traditional side dishes. The traditional side dishes contained a greater density of protein, several B-vitamins, a number of

essential minerals and a more favourable omega 6 to omega 3 fatty acid ratio (Sheehy et al., 2014). The traditional food processing techniques that could enhance the bioavailability of some of these micronutrients in plant-based diets with the aim of ensuring nutrition security and eradicating hidden hunger among the indigenous people (Platel & Srinivasan, 2016) (Hotz & Gibson, 2007).

Table 9. The Preference Of The Agricultural Households Of The Lembak Tribe For Traditional Vegetables

No	Traditional vegetables	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Gulai manis taboo telur	31; 30(96.8)	31; 30(96.8)	33; 32(97.0)	29; 29(100.0)
2.	Gulai ten wanmango	28; 24(85.7)	28; 24(85.7)	31; 29(93.5)	26; 23(88.5)
3.	Sambal gelding	27; 26(96.3)	27; 26(96.3)	29; 27(93.1)	26; 25(96.2)
4.	Sambal pirate	28; 22(78.6)	29; 22(78.6)	30; 26(86.7)	27; 22(81.5)
5.	Sambal tiringtaco	25; 22(88.0)	25; 22(88.0)	25; 23(92.0)	23; 22(95.7)
6.	Sambal terong	32; 29(90.6)	32; 29(90.6)	35; 35(100.0)	33; 33(100.0)
7.	Sambal tomato ikan Teri	31; 28(90.3)	31; 28(90.3)	33; 33(100.0)	29; 29(100.0)
8.	Sambal unji	24; 16(66.7)	24; 16(66.7)	21; 19(90.5)	24; 20(83.3)
9.	Tumis pucuk gelding	31; 24(77.4)	31; 24(77.4)	32; 29(90.6)	30; 28(93.3)

Table 9 showed the preference of the agricultural households of the Lembak tribe for traditional vegetables, namely, *sambal tomato ikan teri* (anchovy in tomato sauce), *sambal terong* (eggplant in chili sauce) and *gulai manis taboo telur* (sweet *tebu telor* curry). Almost all of the agricultural households' mothers and fathers of the Lembak tribe liked the traditional vegetables of the Lembak tribe.

2.3. Rejang Tribe

Table 10 showed that all of the indegenous snacks of the agricultural households of the Rejang tribe were favored by members of the agricultural households of the Rejang tribe. The traditional Rejang snacks that were processed with sweet and savory flavors as well as soft texture make these snacks preferred by various age groups among the households of the Rejang tribe.

Table 10. Preference Of The Agricultural Households Of The Rejang Tribe For Traditional Snacks

No	Traditional Snacks	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Bolu kola	1; 1(100.0)	28; 27(96.4)	32; 31(96.9)	31; 30(96.8)
2.	Cucur	1; 1(100.0)	31; 29(93.5)	32; 30(93.8)	32; 30(93.8)
3.	Culik gigi	3; 3(100.0)	34; 30(88.2)	35; 35(100.0)	34; 34(100.0)
4.	Godok-godok	1; 1(100.0)	35; 34(97.1)	37; 35(94.6)	37; 35(94.6)
5.	Juada lembut	2; 2(100.0)	31; 31(100.0)	32; 32(100.0)	30; 30(100.0)
6.	Kripik pisang	2; 2(100.0)	35; 34(97.1)	34; 34(100.0)	36; 35(97.2)
7.	Kue bolu	3; 3(100.0)	37; 36(97.3)	37; 37(100.0)	37; 37(100.0)
8.	Kue kembang setaun	2; 1(50.0)	34; 31(91.2)	34; 33(97.1)	33; 31(93.9)
9.	Kue tat	3; 3(100.0)	36; 35(97.2)	36; 36(100.0)	38; 37(97.4)
10.	Onde-onde	1; 1(100.0)	28; 28(100.0)	29; 26(89.7)	28; 28(100.0)

Table 11 showed that the children and mothers of the Rejang tribe households liked traditional side dishes in the form of *gulai ikan lemea* (*lemea* fish curry), *tempoyak ikan nila*, *rendang monok* and *lapen monok*. The side dishes were made of fish as the basic ingredient (*gulai ikan lemea*, *tempoyak ikan nila*) and

chicken (*rendang monok* and *lapen monok*). While the fathers of the Rejang tribe agricultural farmers preferred *gulai ikan undok tegrung*, a side dish with the basic ingredients of fish mixed with coconut milk and eggplant vegetables.

Table 11. Preference Of The Agricultural Farmers Of The Rejang Tribe For Traditional Side Dishes

No	Traditional side dishes	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Guasan	0; 0(0.0)	15; 11(73.3)	0; 0(0.0)	0; 0(0.0)
2.	Gulai ikan lemea	1; 1(100.0)	0;0(0.0)	33; 33(100.0)	34; 34(100.0)
3.	Gulai ikan undok tegrung	0;0(0.0)	28; 24(85.7)	0;0(0.0)	0;0(0.0)
4.	Ikan pais	0;0(0.0)	28; 22(78.6)	0;0(0.0)	0;0(0.0)
5.	Lapen monok	1; 1(100.0)	0;0(0.0)	33; 32(97.0)	33; 32(97.0)
6.	Pucung	1; 1(100.0)	0;0(0.0)	31; 29(93.5)	32; 29(90.6)
7.	Rebung asam ikan gaguk	0;0(0.0)	30; 21(70.0)	0;0(0.0)	0;0(0.0)
8.	Rendang monok	1; 1(100.0)	0;0(0.0)	33; 32(97.0)	33; 32(97.0)
9.	Tempoyak ikan mungkus	0;0(0.0)	33; 24(72.7)	0;0(0.0)	0;0(0.0)
10.	Tempoyak ikan nila	2; 2(100.0)	0;0(0.0)	35; 35(100.0)	35; 34(97.1)

Table 12 showed all children of the agricultural households of the Rejang tribe liked traditional vegetables, namely stamen, namely vegetables *gulai nangko*, made from young jackfruit, processed with a mixture of coconut milk and anchovy. Almost of the mothers from the agricultural households of the the Rejang tribe liked all traditional Rejang vegetables

while fathers preferred *gulai nangko* and *sambal tempoyak*. This traditional food system produces rich sources of energy, protein, minerals and vitamins, including iron and vitamin A. In a study, vegetables played central dietary roles, and they supplied a signicant portion of micronutrients to the diet (Grivetti & Ogle, 2000).

Table 12. Preference Of The Agricultural Households Of The Rejang Tribe For The Traditional Vegetables

No	Traditional vegetables	Grandmothers	Father	Mothers	Child
		N; n(%)	N; n(%)	N; n(%)	N; n(%)
1.	Gulai lepang	1; 1(100.0)	26; 20(76.9)	30; 28(93.3)	31; 29(93.5)
2.	Gulai nangko	2; 2(100.0)	34; 32(94.1)	35; 34(97.1)	35; 35(100.0)
3.	Gulai poong	1; 1(100.0)	32; 24(75.0)	33; 32(97.0)	33; 32(97.0)
4.	Gulai telung	1; 1(100.0)	26; 20(76.9)	31; 30(96.8)	31; 30(96.8)
5.	Gulai umbut	2; 2(100.0)	28; 24(85.7)	28; 27(96.4)	28; 27(96.4)
6.	Gulai umbut sawit	1; 1(100.0)	30; 23(76.7)	30; 29(96.7)	30; 27(90.0)
7.	Rebung manis masak tumis	1; 1(100.0)	33; 26(78.8)	37; 34(91.9)	37; 36(97.3)
8.	Sambal gedang	2; 2(100.0)	34; 27(79.4)	38; 36(94.7)	39; 37(94.9)
9.	Sambal telung kacang	1; 1(100.0)	27; 23(85.2)	28; 24(85.7)	26; 23(88.5)
10.	Sambal tempoyak	2; 1(100.0)	35; 32(91.4)	38; 36(94.7)	38; 36(94.7)

CONCLUSION

In the rural households there were three tribes namely Serawai, Rejang and Lembak. From a qualitative perspective the concept of "Traditional" in a food context is made up of five main dimensions: heritage, variety, habit, origin, simplicity, and special occasions. There is so much diversity in indegenous health foods of three tribes were *bolu semut*, *rebung asam ikan gaguk*, *guasan*, *gulai nangko*,and *gulai jamur gerigit*. Preferences for indegenous foods among different generations show preference for traditional snacks, traditional side dishes and vegetables in households. The preference for indegenous foods varied between the children, mothers and fathers.

Availability of data and materials. We do not wish to share our data, for some confidential statement from some information which cannot be shared in public. Desri Suryani: data collection, data entry, report writing, participated in the drafting of the manuscript and edited the manuscript

Ali Khomsan: ethical clearance, survey of study site

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