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Gambier Potential as the Mainstay of Pakpak Bharat Regency in Increasing People's Economy

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ABSTRACT

Indonesia constitutes the main supplier of gambier demand by supplying at least 80% of world's gambier demand. In Pakpak Bharat, gambier is one of the leading commodities and can almost be found in the entire area. So, the regency is a potential area as to be developed to be the major producer of gambier. However, in general, gambier farmers' bargaining position is still weak and the prices of gambier enjoyed by farmers are still far less than the prevailing price in the international market. Therefore, it needs to examine how the economic advantage of gambier could help to improve the economy of people of Pakpak Bharat. Thus, this research is intended to figure out the role gambier plays towards people's economy, identify the marketing chain of gambier and find out the economy level of gambier farmers. Based on the data analyzed, it was obtained that lands to plant gambier in Pakpak Bharat are at level of fairly suitable and marginally suitable. Gambier plays a meaningful role in the economy of locals, gambier farmers have relatively equal income as the income of local people as a whole even higher than that of coffee farmers who are the mainstay of the community. The cultivation techniques are still traditionally performed, the production is not maximized yet and the productivity is still relatively low. Farmers' bargaining position is still weak as prices are entirely set by middlemen and farmers just accept the price set. Other important issues are the low quality and form of gambier to be traded. Gambier deserves the attention to be developed, so that Pakpak Bharat Regency is capable to be one of the potential regions to develop gambier, local government is also expected to assist ideal marketing as well as helping increase international market share of production of Pakpak Bharat gambier. The local government is also expected to be able to raise the production, to improve the quality, and to increase the added value.

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INTRODUCTION

Gambier (*uncariagambier*) is a species of a flowering plant in the genus *Uncaria* in family *Rubiaceae*. Naturally, gambier grows in forested areas with an elevation of 200-800 meters above sea level that has evenly distributed rainfall throughout the year and sufficient sunshine, with temperatures ranging between 26 – 28^oC and humidity reaching 70-80%. The area around the equator with rainfall 2500-3000 mm per year is suitable for the growth of gambier (Gumbira, 2009). Gumbira quoted Cantley (1885) who remarked that based on its morphological traits, gambier includes half-climbing shrubs having wooden trunk. Gambier is numerous in Sumatera and gambier production can be found considerably plenty in West Sumatera, where 80% of national gambier production stems from this area. Other areas which produce gambier include Aceh, North Sumatera, South Sumatera and Bengkulu.

Gambier is one people's plantation commodity which is high in economic value and prospective to be commercially developed in the future. Given its diverse usabilities, gambier possesses numerous benefits namely as remedy, mixing ingredients in cosmetic industry, pharmaceutical, tanner, beverages, paints as well as conservation plant (Sri PujiRahayu, 2012). Gambier is also referred to as vegetative pesticides and conservation plant. Described further, gambier is one of the agriculture products of plantation sub-sector which becomes exported commodities. According to A. Manan (2008), Indonesia constitutes the main supplier of gambier demand by supplying at least 80% of world's gambier demand, exported to countries such as India, Bangladesh, Pakistan, Singapore, Malaysia, Japan and Germany, meanwhile it was said in Sri PujiRahayu(2012) that 85% of

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world's gambier needs was supplied from West Sumatera exported to India, Bangladesh, Pakistan, Taiwan, Japan, South Korea, France and Switzerland and 15% was for domestic consumption.

The table of gambier export to various Countries in 2006 presented in detail attabel 1.

Table 1: Gambier Commodity Export in 2013 by Countries of Destination.

Countries of Destination	Year 2013	
	value (US\$)	Volume (Kg)
Japan	205,269	39,640
Korea, Republic Of	77,385	24,416
Taiwan, Province Of China	19,937	7,000
China	36,650	12,500
Thailand	8,614	3,075
Singapore	398,074	147,240
Malaysia	48,946	34,480
Nepal	56,750	22,000
Viet Nam	79,810	25,000
India	32,332,284	14,113,743
Pakistan	946,444	858,840
Bangladesh	390,192	330,000
Sri Lanka	32,036	13,000
Saudi Arabia	30,249	12,000
Turkey	54,400	21,760
United Arab Emirates	7,681	6,000
United States	122,700	412

Source: Agriculture Department, 2014

The Department of Trade of Indonesia has set quality standards gambier to increase export. According to trading standards, the quality of gambier consists of three kinds of quality. Terms of each quality can be seen in the table 2.

Table 2: Characteristics and Quality Terms Gambier For Export.

No	Characteristics	Terms		
		I	II	III
1	Form	Uniform	Uniform	Uniform
2	Color	Yellow	Tawny	Blackish
3	Maximum water levels (%)	17,0	17,0	17,0
4	Maximum ash levels (%)	7,0	7,0	7,0
5	Material Insoluble in alcohol maximum (%)	12,0	12,0	12,0
6	Katechin Minimum levels(%)	40,0	30,0	20,0

Source :BuletinInformasiPertanian No. 01 Hal.9 dalamSinamo, H (2005)

The quality desired for overseas market of gambier is categorized as the first quality and the second quality. One of the important considerations in determining the quality of gambier is the water content. Determination of water content of gambier is useful to determine the length of storage and gambier resistance against fungal attack, the higher the water content the more easily attacked by fungus.

Although Indonesia is world's major exporter of gambier, gambier farmers' bargaining position in Indonesia, however, is still weak, prices of gambier enjoyed by farmers are still far less than the prevailing price in the international market (BPEN, 2006). In fact, the potential of gambier is considerably more enormous because gambier can be processed domestically into different forms, such as in the form of biscuits or gambier flour which is suitable to the world market demand. Moreover, the uses of gambier can still be continuously developed such as into an adhesive to plywood or particleboard in another country. According to Sri Puji Rahayu (2012), India alone required gambier as many as 6000 tons annually.

However as expressed previously, the progress of gambier export is not to be hoped so much as farmers do not focus only to put forth processing gambier as well as the quality is still far below standard due to maintenance and processing are carried out traditionally. Data issued by Central Bureau of Statistics of West Sumatera in 2000-2006, West Sumatera's export volume growth of gambier in total has experienced year-to-year decline, except 2004. The main culprit of the condition is the low quality of gambier. Unproven quality of product leads to the decline of market demand. The export value that tend to continuously decline is inseparable from the weakening gambier price in the international market. This circumstance brings about significant price fluctuations. (NurAfni Evalia, 2012). According to Asben (2008) in NurAfni Evalia (2012), problems which are faced in the exploitation of gambier, are 1) low quality of gambier and significant loss during processing which is in need of quality improvement, 2) marketing chains which is extensively lengthy and dominated by foreign parties (Singapore and India), 3) low bargaining power of farmers and there is no guarantee stable prices at a profitable level of farmers, 4) the lack of information on international market regarding the real and prevailing price of gambier, 5) there exist practiced of mixing gambier with other ingredients which eventually leads to

low market value, and 6) local government role which is limited. The main problem in gambier issue currently happening is because of the low productivity and quality of the product, caused by the ways of cultivation and processes of postharvest/processing which is yet to be optimal as well as technological support which is still insufficient. However based on Reflis' research (2012), the average income of gambier businesses is efficient and profitable.

As described earlier the apart from West Sumatera, North Sumatera is also one of some gambier producing areas. According to Abdul Rauf and Rahmawaty (2014), gambier planting/producer areas in North Sumatera are Tapanuli Utara Regency, Central Tapanuli, Deli Serdang and Pakpak Bharat. In Pakpak Bharat, gambier is one of the leading commodities besides patchouli, coffee and frankincense. Gambier in Pakpak Bharat is mostly or even entirely cultivated in hilly areas and sloping land. Gambier plantation areas in Pakpak Bharat in 2009, which are entirely owned by locals, reach 700 hectares with production reaching 400 tonnes annually. So, in North Sumatera, Pakpak Bharat alone is a potential area as to be developed to be the major producer of gambier because gambier can almost be found in the entire area of Pakpak Bharat (A. Manan, 2008). Furthermore, A Manan pointed out that each farmer possesses an average one hectare, if processing could be carried out two times in a day, then it is considered feasible to cover daily needs of gambier farmers. Gambier would be increasingly important to Pakpak Bharat Regency because starting in 2012 the government of Pakpak Bharat Regency has launched Perkebunan IntiGambier(GambierNucleus Plantation) as large as 100 hectares in critical areas (abandoned land) previously fully covered with bushes. Perkebunan IntiGambier(Gambier Nucleus Plantation) was also meant to be a business model of agriculture plantation so as to be pilot both in the efforts to rehabilitate critical areas and to modernize techniques of cultivation and processing post harvest up to the downstream industry. Abdul Rauf and Rahmawaty (2014) explained further that the growth and development of gambier in KebunIntiGambier (Gambier Farmland Nucleus) of Pakpak Bharat Regency is ideally good, it can be observed by the growth development of the plant in an interval of 4-5 months, although observation as of October 2013 still showed that there were still some plants growing with irregular patterns.

Problems Identification:

Although it has been elaborated that gambier is a potential export commodities and Pakpak Bharat Regency has have a gambier development program, moreover, the government of Pakpak Bharat Regency has intensified the cultivation of gambier plant as the leading commodity and target that gambier to become the "icon" of agriculture of Pakpak Bharat Regency (SIB Daily Newspaper, 2014), however it needs to examine how the economic advantage of gambier could help to improve the economy of people of Pakpak Bharat Regency. Therefore, this research is intended to figure out the role gambier plays towards people's economy, identify the marketing chain of gambier and find out the economy level of gambier farmers.

Research Method:

The data used are the primary and secondary data obtained through the cooperation of the Faculty of Agriculture, Medan Area University with Conservation International. Primary data collection method in this research was carried out descriptively (*descriptive research*). Descriptive research is research that intends to make descriptions of situations or events. so that in analyzing the data, it does not need to find the relationship among variables, to test the hypothesis, and to make statistical forecast.

Data collected consist of quantitative as well as qualitative data. Quantitative data is comprised of the selling price of gambier, the areas of gambier planting land owned by farmers, farmers' income both family income and income per number of dependants, while the qualitative data collected relates to the mechanism of gambier sales by farmers and the chain of gambier trading system.

There were three methods used in collecting the data, by using:

1. Individual Interview:

Individual interview was conducted at household samples. The method of sample collection was done in 4 sub-districts. The determination of the 4 sub-districts was based on aspects: population, the potential of the agricultural sector and areas of forests. The four sub-districts were SalakSubregency (KecamatanSalak), SitelluTaliUrangJahe(STTU Jahe) Subregency (KecamatanSTTU Jahe), KerajaanSubregency (KecamatanKerajaan) and Siempat Rube Subregency (KecamatanSiempat Rube). From the four subregencies, nine villages were selected consisting of three less developed villages and three more developed villages. Each village has 160 household samples. The number of household samples was 540 households in total. As for the villages to be sampled in this study can be seen in the following table 3.

The four subregencies selected represent northern region and western region of Pakpak Bharat Regency. Subregencies representing the northern area are Salak and Siempat Rube, while the ones representing southern areas are Kerajaan and STTU Jahe. These four subregencies can represent information to describe the state of Pakpak Bharat as a whole.

Table 3: Villages Taken as Samples.

Villages	Subregency	No
KutaTinggi, BoangManalu	Salak	1.
Siempat Rube I, Mungkur	Siempat Rube	2.
Pardomuan, SurungMersada, Majanggut I	Kerajaan	3.
Kaban Tengah, Malum	STTU Jehe	4.

2. Focus Group Discussion (FGD):

Focus Group Discussion was conducted to obtain data through discussions involving various stakeholders concerned. FGD was held for one day in the capital of Pakpak Bharat by number of participants 20 people comprising elements of local government representatives, farmers' representatives, and non-governmental organization.

3. In-depth Interview with Sources:

Interviewing the sources was conducted to obtain data through interviews to interviewees associated in this study. The interviewees interviewed were the head of governmental agencies namely Department of Agriculture and Plantation; Regional Planning and Development Agency (BAPPEDA); the Office of Industry, Trade, Cooperatives, and Small Medium Enterprises; the Office of Regional Revenue; Finance and Asset Management; and the representative of traders.

The Description of Pakpak Bharat:

Pakpak Bharat regency which lies in the Province of North Sumatera was the expansion of Dairi Regency in 2003. Pakpak Bharat Regency lies between latitudes $2^{\circ}15'00''$ - $3^{\circ}32'00''$ North, and longitudes $90^{\circ}00'$ - $98^{\circ}31'$ east. Administratively, the border of Pakpak Bharat to the North is Dairi Regency, to the East Samosir Regency, Dairi and HumbangHasundutan, to the South Central Tapanuli and HumbangHasundutan, to the West Aceh Singkil Regency. Pakpak Bharat Regency covers an area of 1.218 Km² comprising of 8 regencies and 52 villages.

Pakpak Bharat is a region with a tropical climate which is actually influenced by its location that is near the equator. Pakpak Bharat Regency lies at an altitude of 700-1500 m above sea level with rugged topography. Average temperature is 28^oC with average annual precipitation about 311mm. Population of Pakpak Bharat in 2012 was as many as 41.492 people with a density of 34 inhabitants/km², consisting of 20.938 males and 20554 females and an average 4 inhabitants in every household.

Roads in Pakpak Bharat regency based on the types of roads, pavements (43.77%), dirt road (40.02%), stone path (16.01%). The conditions of dirt roads and stone paths can be extremely muddy during rainy season. Communication access of telephones can only be found in Salak Subregency and Kerajaan Subregency with 240 customers in total. To access communication through cell phones, most locals (71.8) possess one. The others (28.9) do not own one due to various reasons such as financial constraints to afford one or the feeling of not needing one.

Results and Analysis:

The result and analysis is divided into three parts, namely land suitability; the position of gambier compared to other plants in Pakpak Bharat Regency, and The Role Gambier Plays in Economics of Families; and techniques of cultivation and gambier marketing system.

1. Land Suitability:

As for land suitability, based on survey results and sampled soils, the land was classified as the most appropriate (S1), fairly suitable (S2), marginally suitable (S3), and unsuitable (N). It was obtained that lands to plant gambier in Pakpak Bharat are at the level S2 or fairly suitable and at the level of S3 or marginally suitable. The information is detailed below in the following table 4.

Table 4: The Classification of Actual Lands' Suitability for Gambier Plant in Several Villages in Pakpak Bharat.

CMU	Suitability Classification	Description :
CMU-1	S3-nr,a, eh ^{*)}	nr = hara retention, eh ^{*)} = the danger of erosion especially land with slope >50*, a= acidity CMU = compound mapping unit
CMU-2	S2-nr,a	
CMU-3	S3-nr,a	
CMU-4	S3-nr,a	
CMU-5	S2-nr	
CMU-6	S2-nr	
CMU-7	S2-nr	
CMU-8	S2-nr	

2. *The Position of Gambier Compared to Other Plants in Pakpak Bharat Regency and The Role Gambier Plays in Economics of Families:*

As for the development of agribusiness including gambier commodity, Pakpak Bharat Regency will establish a Regional Company which is engaged in the field of agribusiness named PD PAL which stands for Perusahaan Daerah Agro Lestari (Agro Lestari Local Government Company). PD PAL was founded so as to stabilize the price of agricultural commodities, increase added value and improve the welfare of farmers in Pakpak Bharat Regency. PD PAL is expected to be a the driving force for the Pakpak Bharat Regency, especially for potential agricultural sector including upstream, downstream, as well as in cultivating, processing, and marketing gambier. However, from the results of the in-depth interviews, it is concluded that many locals become agents in the marketing chain of gambier, in which that when the chain of trading is shortened without involving agents and the third party taken over directly by PD PAL, the agents who are locals of Pakpak Bharat Regency will lose their source of income, in short the presence of PD PAL will turn into competitor to some community members of Pakpak Bharat.

Referring to the results of the interviews and the focus group discussion, for the time being products of gambier have been diversified into multiple ready-to-use products, such as sweets, syrups and gambier tea. But, the aspects of marketing gambier as processed products have yet to have good market due to (i) the input of the processed products have yet to be standardized, (ii) the costliness of the products compared to other similar products such as tea and syrups that have normally used, and (iii) the insufficient promotion of processed products of gambier.

Gambier which is part of significantly important commodity makes up the second most cultivated annual plant in Pakpak Bharat Regency as seen in Figure 1 below.

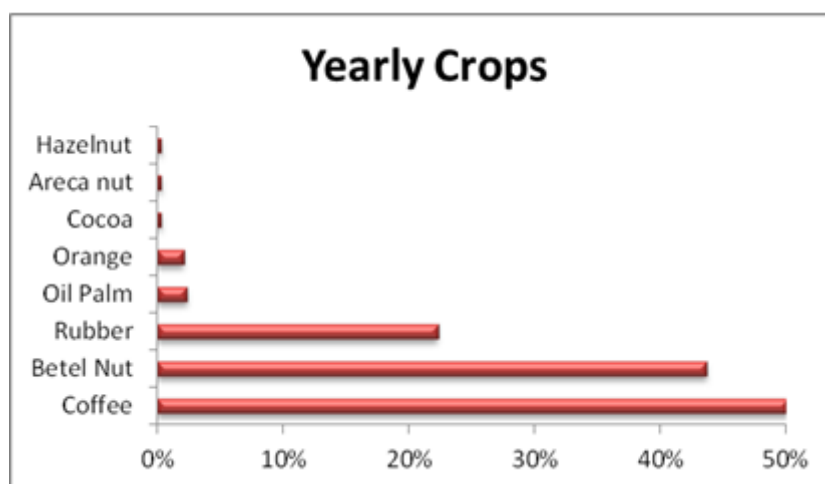


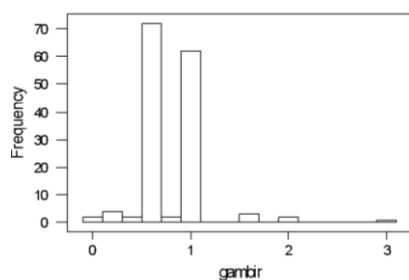
Fig. 1: Graph Percentage of Annual Crops Cultivated by Sample Farmers in Pakpak Bharat Regency.

Of all samples which were taken for the entire sample villages, there are 150 households (26%) that earn income by means of gambier and this is the second largest after coffee, as many as 171 households (30%). Locals of Pakpak Bharat who make a living from gambier have an average income of 1.57 million rupiahs which amount is nearly equal to the average income of the sample which amounts 1.55 million rupiahs. When compared to the average income of coffee farmers which is 1.31 million rupiahs, the income of gambier farmers are still higher, however if the amount is divided by numbers of dependants, the income of coffee farmers per dependant is higher than that of gambier farmers, which is 445 thousand rupiahs compared to 376 thousand rupiah, while the average income per dependent for the whole sample is 455.

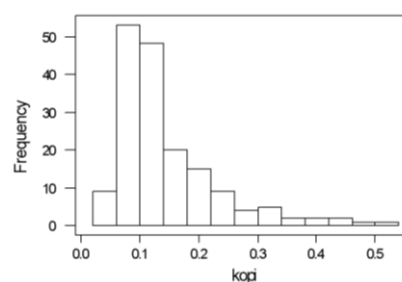
Between the two major crops namely coffee and gambier in Pakpak Bharat Regency, grouping seems to be apparent, which is in the Northern region covering the area of Siempat Rube Subregency and Salak Subregency, tend to cultivate coffee instead of gambier, on the other hand, the Southern region covering Kerajaan Subregency and STTU Jahe tends to cultivate gambier instead of coffee. Thus, it can be concluded that gambier to locals of Pakpak Bharat is actually a reliable alternative crop to be the source of income.

Regarding the area being cultivated, the average land area for gambier cultivation is 0.75 ha and if it is compared to the average land area cultivating coffee (0.14 ha), the area of gambier plantation is still larger, even the average land area for gambier is larger than the average land area for the entire annual crops (0.42 ha)

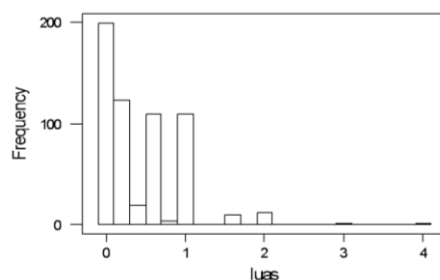
Concerning the size of spread pattern of gambier, data gathered pointed out that a large number of farmers own small size farmland and the number is decreasing along with land expansion or it is said that the size of spread pattern of gambier in Pakpak Bharat Regency skew to the left. The following figures 2 will point out the histogram of land area of gambier cultivation in Pakpak Bharat Regency.



Picture 2a. The distribution of farmland areas of gambir



Picture 2b. The distribution of farmland areas of coffee

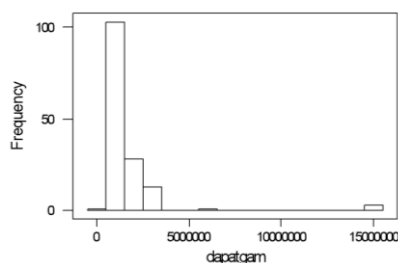


Picture 2c. Distribution of farmland areas of the whole annual crops

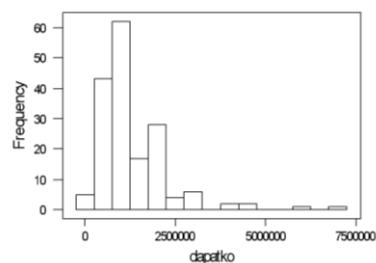
Fig. 2: The Distribution of Farmland Areas of Gambier, Coffee, and the Whole Annual Crops.

Referring to figures 2 above, it is apparent that the spread pattern of land area for cultivating gambier looks similar to the spread pattern of land area of coffee crop and the spread pattern of land area of all annual crops as a whole.

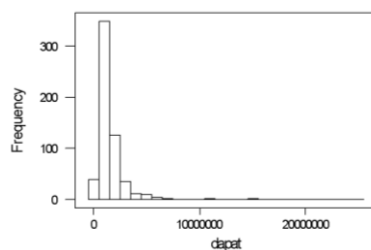
Similar spread pattern is also obtained for the distribution of family income, be it the income of the entire samples, the income of farmers cultivating gambier, as well as the income of farmers cultivating coffee, as seen in the following figures 3.



Picture 3a. The distribution of gambier farmers' income



Picture 3b. The distribution of coffee farmers' income



Picture 3c. The distribution of all samples' income

Fig. 3: The Distribution of Gambier Farmers' Income, Coffee Farmers' Income, and the Whole Respondents' Income.

3. Techniques of Cultivation and Gambier Marketing System:

For the cultivation of gambier, concerning the seedlings, most farmers in Pakpak Bharat use seedlings which are locally produced and some can also be obtained as the assistance of local government. This matter is related to the local government's policy to make gambier as the flagship commodity of Pakpak Bharat Regency.

Furthermore, gambier is not too difficult to tend because gambier is forest plant that does not require special treatment. Besides being a plant tolerant to environment and height, gambier does not have any issue with pests and certain diseases, does not require high dose fertilization, plus it only needs basic maintenance and cultivation.

Gambier can be harvested when it is two years old and normally farmers harvest gambier when the middleman comes and buys their harvest according to the price determined by the middlemen. Most times, gambier sold to the middleman is one that has been molded in the forms of small-shaped mold and dried beforehand. With these systems of harvesting and marketing, margin received by farmers are small and the quality of gambier produced is also low, ideal practice of harvesting should be performed regularly and carried out in the morning. Farmers find this method of trading more preferable as they are reluctant to be busy with taking their harvest to the market or other regions and farmers have also no idea about information of gambier market. Normally, the middlemen come and do business with gambier farmers either one or two days in a week to gather gambier.

There is only one single way of marketing chain of gambier in Pakpak Bharat, with gambier farmers as the market worker, the gatherer or the middlemen, and the wholebuyer. Gambier farmers trade their harvest, which is gambier's dried sap, to the middlemen for Rp. 23.000,. Then, the middlemen wrap the gambier and take it to wholebuyer in Sidikalang. The wholebuyer in Sidikalang buys gambier from the middlemen for 25.500. The scheme of gambier marketing chain in Pakpak Bharat is as seen in figure 4.



Fig. 4: GambierMarket Chain in Pakpak Bharat Regency.

Hereafter, the analysis of the marketing margin of gambier in Pakpak Bharat can be seen in the following table 5

Table 5: The Analysis of Marketing Margin in the Market Chain.

Type of Activities	Satuan (Rp/kg)	Persentase Margin (%)
1. Farmers/Producers		
a. selling price harvest ¹⁾	23.000	63,9%
2. Middlemen		
a. Buying Price	23.000	63,9%
b. Marketing Margin:	250	16,3
-Marketing Cost ²⁾	2000	
-Profit Margin	500	
c. Selling Price	25.500	80,2
3. Pedagang Besar		
a. Buying Price	25.500	80,2
b. Marketing Margin	4500	19,8
-Marketing Cos ³⁾	3800	
- Profit Margin	700	
c. Selling Price ⁴⁾	30.000	100

Nb: 1) Converted to the price of dried gambier sap. 2) Transportation, cargo loading and/or unloading. 3) Drying, packaging, transportation, cargo loading and/or unloading, etc. 4) selling price by the farmer/selling price by the retailer x 100%

As seen in table 5 above, it is clear that the price of gambier from the farmers/producers is as much as Rp. 23.000/kg while the selling price from the wholebuyer is as much as Rp. 30.000/kg. The percentage of the selling price at the level of producer compared to at the level of wholebuyer is as much as 82.3%. The market margin is comprised of two components which are marketing costs and components of profit margin. The highest marketing margin lies with the wholebuyer with marketing margin as much as Rp. 4.500/kg equal to as much as 3.8%. The highest marketing costs lies with the wholebuyer with marketing costs as much as Rp. 3.800/kg with profit margin as much as Rp. 700/kg

In marketing their harvest of gambier, farmers normally talk to middlemen to collect the ready-to-sell gambier, and middlemen will directly come to the farmers. That kind of communication makes the marketing channel shorter because the cost of trading spent by farmers is higher if they take their harvest to wholebuyer compared to if their harvest is picked by middlemen.

In setting prices, middlemen set the prices of the agricultural products that they have from farmers. Factors affecting the set price by the middlemen are (i) prices demanded by the wholebuyer in the City of Sidikalang, (ii) the demand of gambier when transaction takes place, (iii) the cost of transportation to the places of gambier farmers, (iv) the quality of gambier produced by farmers, (v) access to the farmer, and (vi) the state of weather and climate when transaction takes place. This process of price setting has been around for a long time in Pakpak Bharat and farmers accept the truth because they have no idea of the access and information about prices and gambier marketing.

Summary and Implementation:

Of the various indicators above, it is possible to say that gambier plays a meaningful role in the economy of locals of Pakpak Bharat besides coffee, that is a big number of locals earning income from farmers and gambier farmers have relatively equal income as the income of Pakpak Bharat local people as a whole even higher than that of coffee farmers who are the mainstay of the community. However, as the cultivation techniques are still traditionally performed and farmers not only focus on gambier, consequently, production is not maximized yet and the productivity is still relatively low. As for the marketing, farmers' bargaining position is still weak as prices are entirely set by middlemen and farmers just accept the set price. As for the travel infrastructure, long distances to the location of sale, and farmers' lack of motivation to get bigger added value, cause farmers' selling price less profitable price. Besides the problems of production and marketing, the low quality and form of gambier to be traded are other issues. Farmers' low quality of product, low prices received by farmers, low levels of production, the still traditional cultivation techniques, as well as the unavailability of post-harvest treatment are the reasons why farmers do not earn as much as what they should earn, despite all those, gambier plays an important as locals' source of income as well as the family's backbone of economy.

Considering the potential of gambier in international trades and ever increasingly varied uses, gambier deserves the attention to be developed and Pakpak Bharat Regency is capable to be one of the potential regions to develop gambier. Local government's plan to establish 100-acre Perkebunan IntiGambier on critical areas (deserted lands) as well as the establishment Perusahaan Daerah as the driving force of the agricultural sector be it upstream upto downstream and the potential agriculture commodities of Pakpak Bharat especially gambier, is expected to materialize the gambier cultivation in Pakpak Bharat Regency. However, besides problems in terms of production and cultivation, local government is also expected to assist ideal marketing in creating a more efficient marketing as well as helping increase international market share of production of Pakpak Bharat gambier. The local government is also expected to be able to improve the quality of product produced and increase the added value by making the raw materials into consumer goods or intermediate goods.

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