

IDENTIFICATION OF POTENTIAL JERNANG IN JEBAK VILLAGE, BATANG HARI DISTRICT

**PENELITI : ELISA SEPTINA
BALAI KSDA JAMBI**

“SCIENTIFIC PROJECT Z01”

2018



INTRODUCTION

- Jernang (*Daemonorops sp*) is one of non timber forest product commodities (HHBK) which has highly social, economic, and environmental benefits (permenhut, 2007).
- The ecological benefit of the jernang is to maintain the condition of the forest which requires an existence of propagation tree.
- Jernang can be medically used as medicine such as diarrhea, dysentery, wound medicine, dental powder, asthma, etc (Waluyo, 2008). Sap jernang is also used as varnish, ceramic, marble, stone tools, wood, rattan, bamboo, paper, paint, etc. The diversity of the benefits of sap jernang causes the need for this product continuously increased.
- The price of sap jernang at the farm level in the local market is as much as Rp. 400.000,00 – Rp. 800.000,00 each kilogram (Matangaran dan Puspitasari 2012) while the overseas market as in Singapore is around US\$ 300 per kilogram (Kemenhut 2013).
- Utilization of jernang was conducted by the community in Jambi. The utilization of the sap jernang carried out in a way to harvest young fruit from the forest.
- In Batang Hari district, the development of agroforestry system of jernang and rubber also has been done by the society of Jebak village, Bulian Baru village and Jangga Baru village

OBJECTIVE, HYPOTHESIS

Objective :

- The research objective of identification the potential of jernang in Jebak village and surrounding in Batang Hari district are:
 1. Knowing the potential of jernang contained in Jebak village Batang Hari district
 2. Obtaining data and information about cultivation of jernang to be developed in Jangga Baru village with agroforestry system between rubber plant and jernang plant.

Hypothesis :

- There are the potential of jernang in forest area and society cultivation area in Jebak village and surrounding that can be developed by agroforestry system of jernang and plantation

RESEARCH LOCATION

Identification began with collecting data and information related locations that have the potential to grow in Jebak village and surrounding areas. Information was obtained from the community and discussions with the researchers (laborers). Based on preliminary information from data collection and information, it was known that some of the locations where the growth of jernang are as follows:

- Tahura Sultan Thaha Syaifudin : Bor 5 And Bor 10
- Durian Luncuk Nature Reserve II
- Cultivation Area Of Jernang Community

METODE

From each location, it is made 2 - 3 plots measuring with size 100 m x 100 m. In the plot measuring 100 m X 100 m, each plots measuring 10 m X 10 m, so that 100 plots of sample were obtained. Of the 100 plot samples were calculated the population of rattan jernang and other types of rattan, then counted the total number of individuals throughout the rattan by growth rate. The growth rate of rattan cane based on Dransfield 1984; INTAG 1989; Kalima 1991; and Siswanto 1991, are as follows:

1. Regeneration : rattan with stem length < 3 m
2. Young rattan : rattan that has a long stem between 3 m - 5 m
3. Half ripe rattan : rattan with stem length 5 m - 15 m.
4. Rattan cooking : rattan with stem length > 15 m

To answer the second objective, descriptive analysis is used through interview method with farmers agroforestry jernang and rubber, which aims to know data and information about the cultivation of jernang with plantation crops such as rubber with agrofofestri system so that it can be a reference to be developed in Jangga Baru village which is also a buffer of Durian Luncuk Nature Reserve II

Potential of jernang

- Based on the identification of the potential of jernang, it is known that there are 2 types of jernang found in tahura STS area and CA area. Durian luncuk II that are:
 - 1. Jernang kemalau (*Daemonorops draco*)
 - 2. Jernang kelukup / berkarung / kelemunting (*Daemonorops didymophylla*)



Table 7. Differences Jernang Kemalau (*Daemonorops draco*) and Jernang kelukup (*Daemonorops didymophylla*)

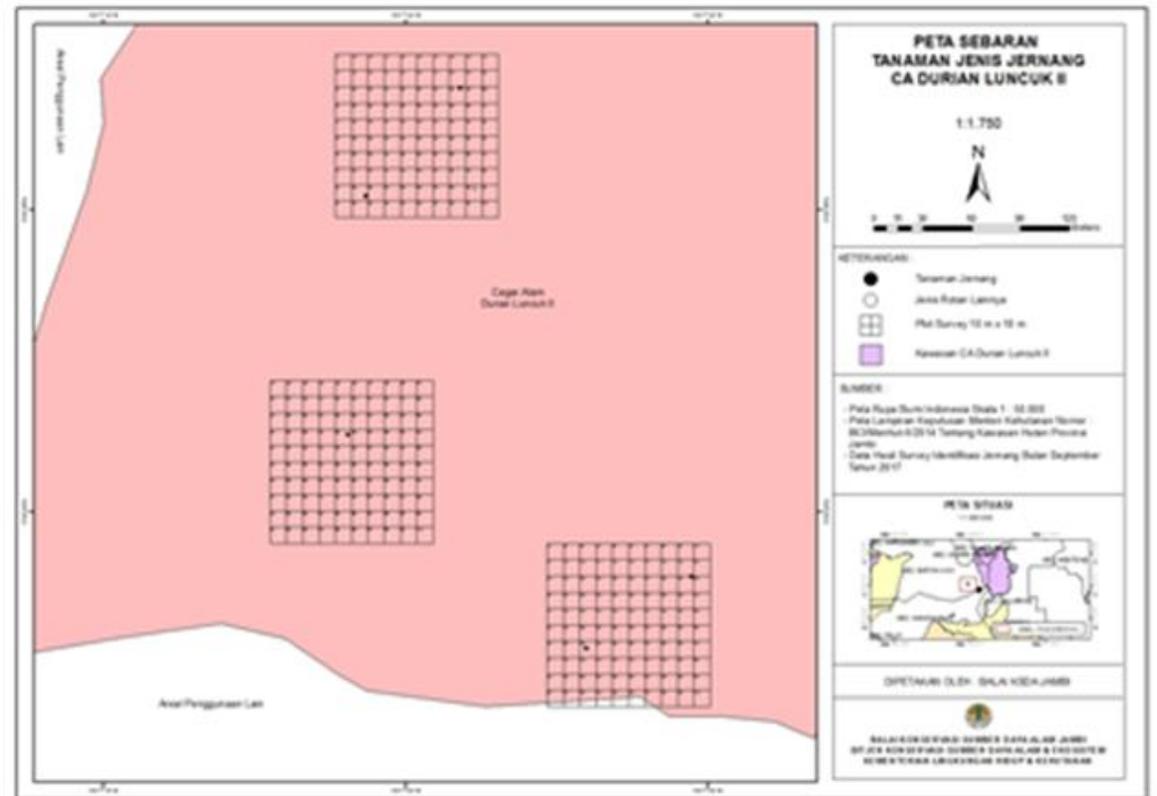
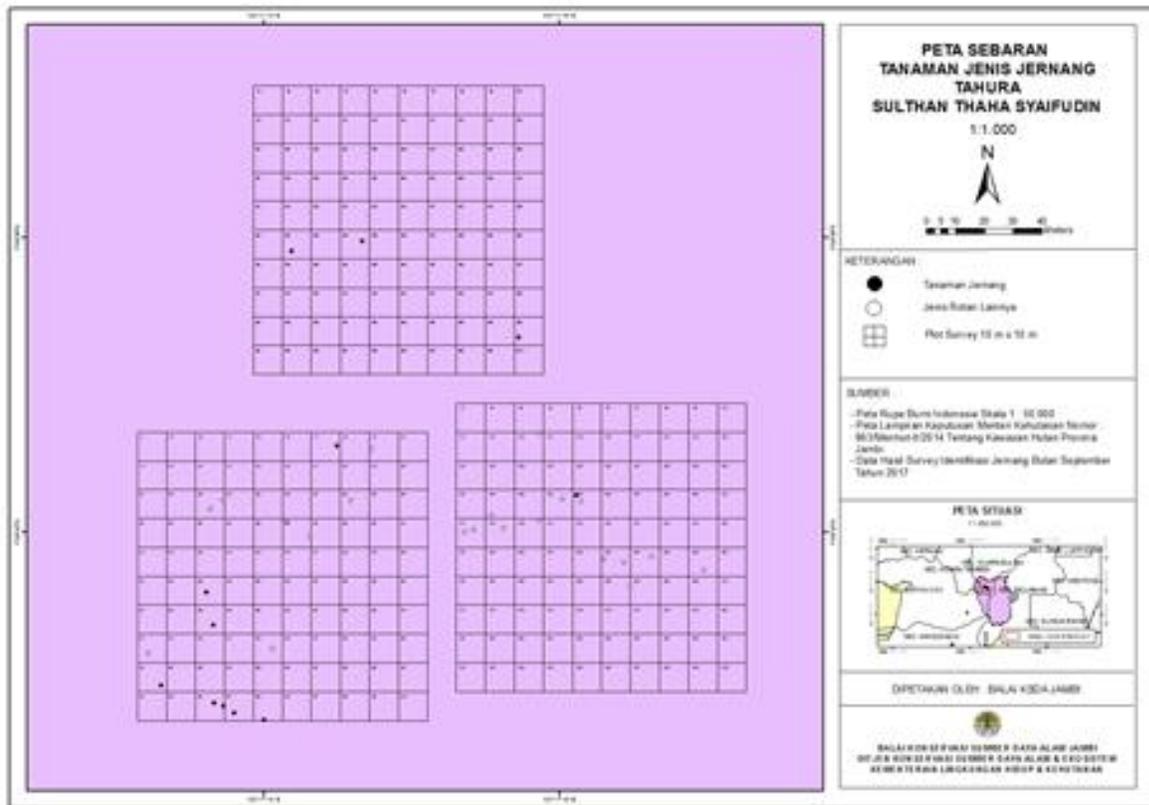
Jernang Kemalau (<i>Daemonorops draco</i>)	Jernang kelukup (<i>Daemonorops didymophylla</i>)
The quality of sap jernang is better (A – B quality)	The quality of sap jernang : C quality
The price is more expensive (3 – 5 million rupiah per kg)	The price is cheaper (500.000 – 1,5 million rupiah per kg)
It has much amount of sap jernang	It has less amount of sap jernang
The fruit is big and darker	The fruit is small and blackish
The strands of flower is longer	The strands of flower is shorter
The composition of flower is dense	The composition of flower is sparse

JERNANG IN RESEARCH PLOTS

Jenis	Tahura STS	CA. Durian Luncuk II	Community Cultivation Area		
			Mr. Suin rubber garden	Mr. Syam rubber garden	Mr. Pane rubber garden
Jernang Kemalau (<i>Daemonorops draco</i>)	14 clumps e.g. : - 151 seedling stems, - 23 young stems - 6 half ripe stems, - 45 ripe stems	9 clumps e.g. : - 97 seedling stems, - 0 young stem, - 1 half ripe stem - 20 ripe stems.	9 clumps e.g. : - 69 seedling stems, - 37 young stems, - 31 half ripe stems, - 90 ripe stems.	4 clumps e.g. : - 14 seedling stems, - 5 young stems, - 24 half ripe stems, - 26 ripe stems.	1 clump e.g. : - 9 seedling stems, - 0 young stems, - 0 half ripe stems, - 3 ripe stems.

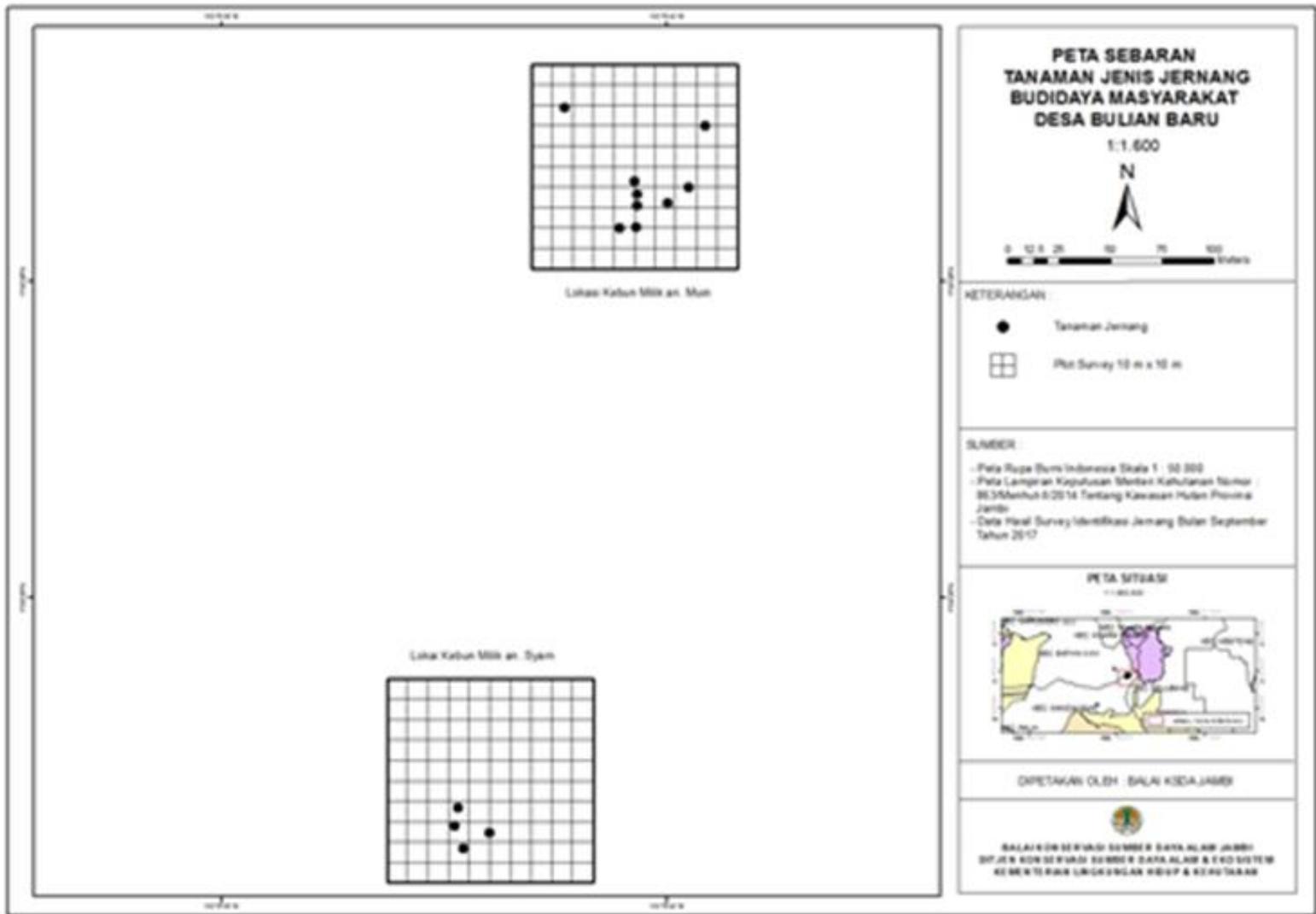


LOCATION DISTRIBUTION OF JERNANG



Jernang was commonly found in burnt-out areas adjacent to swamps or rivers, whereas in dry and open areas the jernang was not found. This is suspected because the nature of growing jernang requires shade, sufficient humidity and host tree as its propagation. That prior to the fire in 2015 that burned most of tahura STS area, people were still looking for and found jernang in tahura STS area. However, after the fire many habitats burned and died.

Many jernang were found wrapped between bulian and medang plants. There are no fruiting conditions but the jernang stems grow well, although it grows naturally in its habitat. With the status of the conservation area, it is not allowed to take timber and non-timber forest products including jernang in this area. Therefore, jernang in this area is rarely taken by the community, because the community of jangga baru and surrounding has understood about the rules of the management of the nature reserve area.



PLOT MEASURE CULTIVATION JERNANG COMMUNITY

DATA COLLECTION OF OTHER TYPES OF RATTAN

No.	Species	stem	Location found
1	Rotan besi	50	Tahura Sultan Thaha Syaifudin
2	Rotan dahan (<i>Calamus flagellaris</i> Burr.)	29	Tahura Sultan Thaha Syaifudin
3	Rotan semut	36	Tahura Sultan Thaha Syaifudin
4	Rotan getah/regis (<i>Daemonorops melanochaetes</i> Bl.)	81	Tahura Sultan Thaha Syaifudin
5	Rotan andong	2	Tahura Sultan Thaha Syaifudin
6	Rotan paledas/seni	11	Tahura Sultan Thaha Syaifudin
7	Rotan tunggal	2	Tahura Sultan Thaha Syaifudin
8	Rotan manau kuro (<i>Calamus manan</i> Miq.)	18	CA. Durian Luncuk II, Tahura Sultan Thaha Syaifudin
9	Rotan semambu (<i>Calamus scipionum</i> Lour.)	7	Tahura Sultan Thaha Syaifudin
10	Rotan sego air (<i>Calamus axillaris</i> Becc.)	8	Tahura Sultan Thaha Syaifudin
11	Rotan sabut	1	Tahura Sultan Thaha Syaifudin
12	Rotan buar	3	Tahura Sultan Thaha Syaifudin
13	Rotan tapa	4	Tahura Sultan Thaha Syaifudin
14	Rotan sikai	1	Tahura Sultan Thaha Syaifudin
15	Rotan temati	2	CA. Durian Luncuk II
	Jumlah	255	

TREE HOST / TREE PROPAGATION JERNANG IN PLOT TAHURA SULTAN THAHA SYAIFUDIN

- In tahura sultan thaha syaifudin was found 20 trees species among others ; tampui, asam-asam, sumpit-sumpit, medang darah, kelat, kayu lilin, sengkung, arang arang, jentikan, simpur rawang, sigam, sungkai, sebas, rambutan hutan, balam, pagar-agar, parak, mahang, lulus, terang.
- The vegetation that dominated in Tahura Sultan Thaha Syaifudin plot was kind of balam with a type density of 20 individuals / plots and INP 37.08.

TREE HOST / TREE PROPAGATION JERNANG IN PLOT CA DURIAN LUNCUK II

- In Durian Luncuk II Nature Reserve Researve was found 7trees species among others ; Sengal, Bulian, Kedondong Hutan, Jangkang, Semuba, Bungur and Medang.
- The dominant vegetation in the plot of Durian Luncuk II Nature Reserve was dominated by Bulian type (*Eusyderoxylon zwagerii*) with individual KJ 5 / plot measuring and INP 52,96



CONCLUSION

- Based on the result of identification of jernang potential in Jebak village Batanghari district, there are two locations that have potential as natural habitat of jernang namely Tahura Sultan Thaha Syaifudin and Nature Reserve Durian Luncuk II. While the other potential is in the area of cultivation jernang grown with agroforestry system in rubber area of Jebak village community and bulian baru village. In three research sites, it is known that there are two types of dominated jernang namely jernang (*Daemonorops draco*) and jernang kemalau (*Daemonorops didymophylla*). It is also found that 2 clumps of jernang are being fruitful in tahura sultan thaha syaifudin (bor 5 and bor 10) and 4 clumps in the cultivation area of mr. Suin. In addition to jernang, there are also found 15 other types of rattan and 28 species of host trees that became the vines in the plot.
- The community of Jebak village and Bulian Baru village has cultivated jernang with agroforestry systems on rubber area. The combination of these two plants is quite beneficial to community. The benefits obtained by the community are in the form of sap rubber and sap jernang. According to this research, it can be concluded that jernang can also be developed in jangga baru village which is a buffer village of durian luncuk II nature reserve which has the same landscape and topography as Jebak village and Bulian Baru village.





**Putri Malu Bersemi di Pagi Hari, Cukup Sekian dan
Terima Kasih
Mari Lestarkan Jernang Lewat Agroforestri**