Lampiran B-16

PROGRAMME BOOK

The 4TH INTERNATIONAL SEMINAR OF REGIONAL NETWORK ON POVERTY ERADICATION

23 - 25 OCTOBER 2013

UNIVERSITI MALAYSIA KELANTAN
JELI CAMPUS, MALAYSIA

RENPER4

Universiti Malaysia KELANTAN

RENPER
REGIONAL NETWORK ON POVERTY ERADICATION

PRESENTATION SCHEDULE

23 OCTOBER 2013 (WEDNESDAY)
SESSION 1

Chairperson : **Dr. Md. Shafiqur Rahman**
Rapporteur : **Hasifah Abdul Aziz**

Time	Titles
0.50 – 11.20	Plenary Paper: **Closed Farming System: An Alternative Poverty Eradication in Kabupaten Rejang Lebong, Bengkulu Province, Indonesia** *Sigit Sudjatmiko, Mohammad Chozin, Zainal Muktamar & Nanik Setyowati*
1.20 – 11.40	**Farming Snakeskin Gourami, *Trichogaster pectoralis*, as a Poverty Eradication Tool** *Lee Seong Wei, Salleh Kamarudin & Mustaqim Md Tajudin*
1.40 – 12.00	**The Importance of Integrated Small Ruminant: Oil Palm System for Poverty Alleviation in Bengkulu Province, Indonesia** *Dwatmadji & Tatik Suteky*
12.00 – 12.20	**An Overview of Poverty Eradication through Entrepreneurship Development in Aquaculture Industry of Red Tilapia** *Kassim Buhiran & Lee Seong Wei*
12.20 – 12.40	**Influence of Local Leadership in Poverty Eradication Among The Orang Asli Comminities in the State of Terengganu, Malaysia** *Ramle Abdullah, Mohamad Hafis Amat Simin & Asmawi Ibrahim*
12.40 – 13.00	**Small Organic Fertilizer Factory Promotion in Rural Community of Northeast Thailand: Poverty Reduction and Toward to Sustainable Agricultural Development** *Phassakon Nuntapanich*

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THE IMPORTANCE OF INTEGRATED SMALL RUMINANT – OIL PALM SYSTEM FOR POVERTY ALLEVIATION IN BENGKULU PROVINCE, INDONESIA.

BY:
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ABSTRACT

The importance of small ruminants has been highlight as they can provide meat, fertilizer, cash income, and deposits. The poverty line in Indonesia remains high (12%) this year, while in the same time the total area of Indonesian oil palm has been steadily increasing throughout the year that reached almost 9.1 million ha this year. It is very prospective to use the free and available land under the oil palm plantation, especially under small scale private plantations, for grazing and providing small ruminant feed. Small ruminant, local goat and sheep, has been introduced recently to be integrated with the oil palm system. As most of the property of private own oil palm plantation in Bengkulu is relatively small (average of 2.4 hectare/farm, ranging from 1.21 up to 5.21 hectare/farm), and have limited access of bank credit, knowledge, and skills, the introduction of small ruminant is the oil palm area was preferable, compared with the big ruminant, especially cattle. This paper highlight the poverty situation in Bengkulu province, and the way the integrated small ruminant-oil palm system can alleviate the provincial poverty condition. The most popular local Indonesian Kacang goat has more advantages compared with the others local sheep (Fat Tail sheep, Thin Tail sheep, Garut sheep) or even other bigger goat (Ettawa, and PE – *Peranakan*/Crossed Etawa).

Keywords: Small ruminant, poverty alleviation, Indonesia

INTRODUCTION

It is believed that poverty reduction is sensitive issue while it is one of the Indonesia development success stories. The Indonesian poverty rate has declined from 40.1% in 1976

to 17.7% in 1996 (Satriawan, 2013). The current poverty status in Indonesia is 12%, which showed a continuing decline since 2006 (World Bank, 2012). The decline was due to the Indonesia government initiative macroeconomic program (Sutiyo and Maharjan, 2011) and various poverty alleviation programs , which include *Inpres Desa Tertinggal/IDT* (Backward Village Program /Development for Remote Villages), *Pembangunan Keluarga Sejahtera/PKS* (Welfare Household Development), *Proyek Pembangunan Prasarana Pendukung Desa Tertinggal/P3DT*, (Development of Infrastructures Supporting Remote Villages), *Proyek Peningkatan Pendapatan Petani dan Nelayan Kecil P4K* (Small Farmers Income Improvement Project), and other related programs (Yusdja *et al*., 2003; Suryahadi *et al*., 2010). Those efforts have been recognized, especially by FAO, successfully reduced poverty from 54.2 million people in 1976 to only 22,5 million people in 1996 At current situation, Indonesia has continued to minimize the poverty condition through Reducing Poor Household's (Expenditures*Rice for Poor - Raskin, Community Health Security - Jamkesmas, Conditional Cash Transfers/CCT* or *Program Keluarga Harapan/PKH),* Enhancing Community's Livelihood (*Self-Help Community Empowerment National Program - PNPM Mandiri), and* Enhancing Community's Savings and SMEs (*Credit for SMEs)* (MOSA, 2013; Satriawan, 2013). The huge efforts have to be continued if Indonesia wants to be emerging developed world in the near future. It is believed that most of Indonesia poor was predominantly (60%) lives on agricultural activities, including food crops agriculture, forestry, fisheries, and livestock.

Indonesia is now the leading supplier for an oil palm global market (Worldwatch Institute 2013), which has oil palm area approximately 9.14 million hectare and estimated to produce 24.3 million ton of CPO (Direktorat Jenderal Perkebunan, 2013). The area is believed to be substantially increased in the near future as the government will allocated more land for the oil plantation. It was estimated that the current available area could accommodate at least an additional 4.5 million cattle or 31.9 million goats/sheep.

BENGKULU PROVINCE: ITS POVERTY AND OIL PALM

Figure 1. Map of Bengkulu province.

Located in South-West Sumatera Island, the size of Bengkulu province is 1.978.870 ha, consisting of 696.924 ha national park, 444.882 ha conservation zone, and 1.281.946 ha used land. (BPS Bengkulu Province, 2013)

Among the existing 33 provinces in Indonesia, Bengkulu Province has higher poverty line (17.4%) (BPS Bengkulu Province, 2013) than that of the average national status of 12%. Nine out of ten regencies (9/10 or 90%) has significantly higher than national indicator, in which only one regency (Bengkulu Tengah) has lower poverty line (6.5%) (Figure 2). This data indicating that all regency has to take seriously the poverty eradication program.

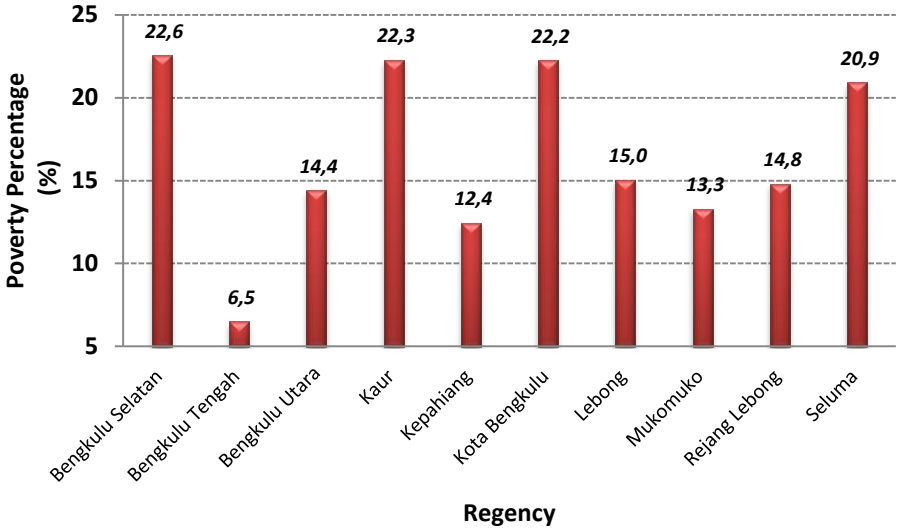

Figure 2. Poverty percentage of Bengkulu Province based on regency data (BPS Bengkulu Province, 2012).

As most of the Indonesian oil palm area is located in Sumatera (80%), most province in Sumatera Island should consider the use of free oil palm area for rearing livestock, in which ruminant (cattle, goat, and sheep), can be effectively kept for grazing. This includes the Bengkulu Province in which mostly consisted of small scale private oil palm ownership. Total

oil palm farm size in Bengkulu Province is approximately 2.4 hectare/farm, ranging from 1.21 up to 5.21 hectare/farm (see Figure 3) (BPS Bengkulu Province, 2012). Hovewer, only two regencies having more than 2 hectare/farmer indicating that it is almost impossible to raise big ruminant (cattle) efficiently. Small ruminant, namely goat or sheep, would be the only option for this farm size.

According Uriarte (2008) agriculture remains a significant sector of economy for sustainable development and poverty reduction. In addition, the importance of livestock in alleviating poverty has been known elsewhere (Millar and Photakoun, 2008; Khan and Mokhtar, 2011; Holman *et al*., 2005). According to Millar and Photakoun (2008) livestock production could reduce poverty and it depends on farmer access to feed resource, land, labour, disease management strategies and reliable market.

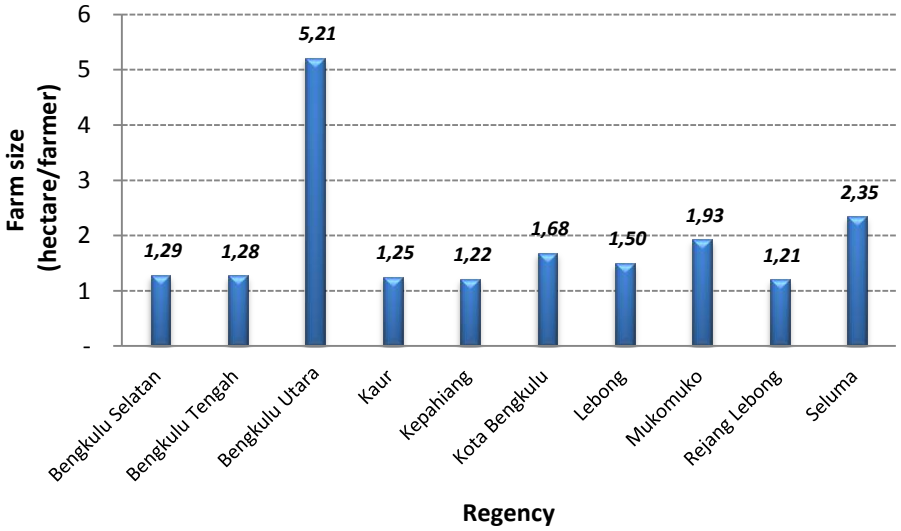

Figure 3. Oil palm plantation size (hectare/farmer) in Bengkulu Province based on regency data (BPS Bengkulu Province, 2012).

INTEGRATED SMALL RUMINANT-OIL PALM SYSTEM

As the oil palm industries is still booming in Indonesia, mostly small scale private plantation, the integration of small ruminant in the oil palm system would be of most importance. Dwatmadji *et al.* (2005 and 2009) found at least 31 forages (grasses, legume, broadleaves, fern and others) under oil palm potentially used as animal feed. There several benefits of integrating small ruminant for the oil palm system (Hart, 2001; Devendra, 2007), including:

- Low capital investment,
- Reducing cost of weeding,
- Providing the natural (manure/feces) fertilizer, therefore reducing chemical fertilizer,
- Improving additional income and live savings, especially when the price of FFB (Fresh Fruit Bunch) drops,
- Providing meat for the family,
- Providing quick cash if needed by selling livestock, especially when the price of fresh fruit brunch decline
- Utilizing oil palm by product and waste (Palm Kernel Cake, POME, frond)
- Controlling unwanted brush and invasive species
- Optimizing land use.

Based on research conducted in Bengkulu Province, the people tends to prefer local Kacang goat compared with other bigger goat breed, namely introduced Boer goat or Etawa goat. Also farmer prefer Kacang goat compared with other local available Indonesian sheep (*Domba Ekor Gemuk* or Fat Tail sheep, *Domba Ekor Tipis* or Thin Tail sheep, and Garut sheep – Merino and local sheep cross). Sheep is also not popular among Bengkulu Province as people has been advised by local livestock officer not to keep sheep with indigenous Bali cattle, as it would transmitted MCF (*Malagnant Catharal Fever*) disease.

The common problem in Integrated small ruminant-oil palm system in Bengkulu Province is that goat, compared to sheep, become more susceptible to infestation of gastrointestinal parasite especially *Haemonchus contortus*. According to Kaplan (2004) gastrointestinal parasite infestation are characteristic of pastoral grazing. *Haemonchus contortus* infestation in goat causes significant production losses and high mortality rate. Our research (Suteky and Dwatmadji, 2009) showed that mortality rate of goat due to *Haemonchus contortus* infestation reach 66.7%. Our findings also showed that broad leaf plant commonly browse by sheep (*Melastoma malabatricum, Urena lobata* and *Ficus sp*.) showed anthelmintic activity *in vitro* (Suteky and Dwatmadji, 2011a). *In vivo* study of crude aqueous extract of *Melastoma malabatricum* showed anthelmintic activity in goat infected *Haemonchus contortus* (Suteky and Dwatmadji, 2011b). However, further study is still needed to examine the bioactive compound of *Melastoma malabatricum* and its doses to animal.

The other important factor influencing the productivity of animals grazed on pastured is stocking rate (Muir, 2006). Stocking rate can be calculated based on animal number per hectare or on the basis of Animal Unit Equivalent (AUE)/hectare. Our research (Suteky and Dwatmadji, 2012) on the performance of goat grazed on oil palm plantation based on AUE indicated that AUE had significant effect ($P<0.05$) on average daily gain .

The other problem in Integrating small ruminant-oil palm system of which could also happened in other province would be security reason (stealing, predator: mostly dog, and goat identification), fencing, and knowledge and skill of the farmer. The University of Bengkulu has been empowered the farmer through occasional public services and farmer-need research.

CONCLUSION

The importance of Integrated Small Ruminant – Oil Palm System can be used for poverty alleviation especially under oil palm (rural) plantations where small scale farm are exist. Some advantages of the system has been mentioned, including low capital investment, reducing weeding cost, providing the natural fertilizer, improving income and live savings, providing meat, providing quick cash, and optimizing land use. The system should involve a closed attention on the incidence of gastro intestinal parasite especially *Haemonchus contortus* as Kacang Goat at Bengkulu Province are susceptible to this parasite. The function of public extension by university staff would be beneficial to the farmer.

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