

## **Integration of Oil Palm and Cattle to Empower Farmers' Economic in East Aceh, Indonesia**

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### **Abstract**

This study examines the integration of oil palm commodities and cattle to empower farmers' economic in East Aceh, Aceh Province, Indonesia. Even though, this paper only focus on empowerment process with aim to discover an integration process of oil palm and cattle made by oil palm farmers. This study used a qualitative approach to analyze data. The results showed that the process of integration of oil palm and cattle are practiced by oil palm farmers without adequate knowledge. In addition, the integration also has done between cattle breeders and oil palm farmers. However local authorities (Aceh Province and East Aceh) have not given the attention for this program to empower the farmers with education and training skill to integrate oil palm and cattle. Whereas such as this program is commonly practiced in Indonesia.

**Key words:** Integration, Oil palm, Cattle and Empowerment.

### **Introduction**

The economic empowerment of Aceh people in post-conflict period, especially the rural communities of former combatants and conflict victims have been done through agricultural assistance, both plantations and farms revived the local economy was collapsed by the conflict. However, its implementation is generally still done separately between plantations and farms. Whereas the integration of plantations and farms might increase the income of farmer communities (Handaka, et al, 2009; Wake, 2010) and the Government of Indonesia has encouraged the integration of plantations and farms to achieve the targets of meat self-sufficiency quickly, especially beef. Thus, Indonesia's dependence on higher imported beef will be decreased. According to the General Director of Foreign Trade, Bachrul Chairi (2014) that self-sufficiency of beef can be accelerated by the concept of integrated farms. The plantations are most likely to be integrated with livestock are oil palm and rubber plantations.

Realizing that, District Government of East Aceh has integrated the cocoa plantations and goats since 2014, to empower economic of rural people. Then in 2015 East Aceh Government planned the same program in order to ensure the integration of oil palm and cattle. Where people who have gained the favor of oil palm in the previous year will also be given assistance of cattle, with an expectation is the economy of society should arise rapidly. This program will be implemented by optimizing the cooperation and synergy among Local Government Units (SKPD) in the Government of East Aceh, especially between the Department of Plantations and Agriculture with the Department of Stock Husbandry, and also the cooperation between the government unit (SKPD) with privates which associated with economic empowerment. The Integration model is the success key of community empowerment process (Miftah and Syarbaini, 2014).

But this program will certainly stack the assistances to the same community, hence this program potentially arise jealousy and social inequality caused by the distribution of government aid is uneven. The increase of revenue only felt by conflict victims and former combatants who have received government's assistance during planting oil palm.

This situation will certainly hamper integration of communities as a whole to realize sustainable positive peace in Aceh. Indeed, this study will examine the process of establishing a model of cattle – oil palm integration to improve farmers' economic.

### **Research Method**

This study used a qualitative approach. The Informants are oil palm farmers who have cattle or vice versa, cattle breeders who do not have oil palm plantation but relinquished his cow in the oil palm plantations of others with cooperation system, the Department of plantation and livestock services of East Aceh Government. Data collected through non-participant observation, in-depth interviews, and documentation. The data analysis was conducted in three stages: data reduction, data display and conclusion (Neuman, 1997).

### **Results and Discussion**

The area of oil palm assistance to former combatants Free Aceh Movement (GAM) and the victims of the conflict in East Aceh is around 3,726 hectares, spread in 23 districts with involvement of 3,408 farmers, and only one district that did not receive assistance for the development of oil palm is Simpang Jernih (Saifuddin, et.al, 2015). However, not all of the oil palm farmers raise cattle in those areas of oil palm plantations. But there are some cattle breeders releasing their cattle in others' oil palm plantations with permission of the landowner, either cattle grazed with raising system or illegal grazing during the day. Most cattle are raised by the community are their own or other's cattle with shared profit management (mawah). Generally cattle are village cattle or pea cattle. While cattle of Aceh Government assistance and East Aceh Government assistance are Bali cattle given to the people who propose it in groups, it's given to each group in different amount, such as Farmers in Seneubok in Nurussalam got 5 bali cattle for ten members of the group. While the Farmers in Alue Dong-Dong got 10 bali cattle for 5 members of the group.

The differences of integration system, freely grazing and kept grazing are seems to strongly influence by the traditional knowledge of farming communities on its raising and fattening. They have not got enlightenment of knowledge and modern technology to integrate cattle with oil palm. They only use the grass or weeds in oil palm plantation areas which palm estimated could not be reached by cattle that interfere the growth of oil palm. Even though, the number of cattle farmers increase every year, in 2012 there were 38 groups, and 2013 were 49 groups. Even in 2014 increased significantly, reaching 100 groups with production reaching 361.232 kg of beef. But the cattle population has decreased, in 2012 as many as 70.874 cattle, in 2013 are 45.030 cattle, and in 2014 are 51.428 cattle (BPS Aceh Timur, 2015).

Nevertheless, the fact according to Aceh Agricultural Instructor, Nani Yulizar (2016) East Aceh District has great potential to develop beef in Aceh province. East Aceh is now listed as the second area that has great potential in developing beef after Aceh Besar District, by comparison East Aceh now has 51,428 heads of cattle and Aceh Besar has 56,000 heads of cattle. However, the problems faced in developing cattle is a system of cultivation still use semi-intensive with simple technology, so the feeding does not meet the nutrition of cattle. Even so, farmers believe that raising cattle in oil palm plantation could increase their revenue. Hanani and Jamilah (2011) stated that integrated cattle-oil palm program is a policy in developing cattle in Aceh to increase people's income. Technology Innovation for integration system of crop - livestock in farming was proven to increase the efficiency of farming (Kusnadi, 2008).

The following are some resumes of interviews with several informants who worked as farmers and ranchers: Oil palm plantations chosen as location for raising cattle based on no other location for grazing cattle. They did not know the benefits of cattle-oil palm integrated system in detail. The cattle grazed in oil palm plantation are privately owned, while government aid is only one cattle in the location managed by Mr. Dahlan and Saifullah. Total cattle assistance from the government to the village of Alue Siwah Serdang in 2015 were 5 cattle for 10 people that distributed by the Department of East Aceh farms. However, we graze it separately with shared one for two people. The cattle assistance are varieties of Bali. The number of cattle in this location are 40 heads with land area is seven hectares (interview with Saifuddin, Kadesh Alue Siwah Serdang, June 3, 2016).

The next, other informants also have in common, their cattle grazed in oil palm plantation is aid of the Animal Husbandry Department of East Aceh in fiscal year 2009/2010, but they received cattle more than the previous informants, there are 10 heads of cattle for five members in group. So each member

gets two heads. The aid cattle is female Bali cattle. One Informant added, his cattle developed from two heads to 12 heads for six years. Some of cattle were sold for the purpose of the economy (Interview with Sutimin, Chairman of the Cultivation of Farmers, Rural Alue Dondong 2, District Rantau Panjang Perlak, July 16, 2016).

According to him, six heads of cattle are grazed in 3 hectares of oil palm. The cattle released from its cage in the afternoon, at about 3 pm using kept grazing systems (Peurabe Leumo) and then return to be stabled at 05 pm. This purposes to maintain weeds growing in sustainability. By this way, the need of grass for cattle might be met every day, because the cattle will not roam everywhere, so that it given times to weeds to grow up. If it runs out at one location, moved to another, and the location continued to alternate on the next turn. Thus, when it comes to the turn, weed has grown back and ready for the cattle. In their opinions, stabling cattle back at 5 pm should still be given food and drink at night to ensure insufficient nutrients and accelerate the growth and fattening. According to their experience, farmers believe that feeding and drinking cattle at night better and faster for growth and fattening.

While Abdurrahman said that the cattle grazed in his palm plantation is his own, not an assistance of Aceh Government. He grazes cattle in a number of 30 heads, but some are other's. Only 13 heads are belonging to him, and 17 heads are his friend's. All their cattle grazed freely in 13 hectares of oil palm. Although the owners of cattle are two people, they keep cattle grazing to gather in one and same area of oil palm. Only at night, the cattle were placed in three hectares of oil palm which has been fenced with no cages, except during the rainy season made tents to shelter cattle at night. Meanwhile, to fatten cattle usually five to six months before being sold, cattle caged to feed by adding concentrate on feed. This thing was done alone or cooperated with other people who want to do with mawah system (shared profits) with profits shared equally, 50: 50 (Interview with Abdurrahman, Seuneubok Village, District Nurussalam, July 18, 2016).

Nevertheless, the integration process of oil palm with cattle conducted by Abdurrahman is also a natural process, which means that he do not has specific knowledge about the integration of oil palm with cattle. However, he has been doing this process since 2010. Previously, he had oil palm area with only 3 heads of cattle that kept by utilizing the weeds around oil palm. While rice planting season paused for moments, his cattle released to the rice fields. After he has oil palm plantation, he initiate to take advantage of the oil palm plantation to raise cattle in it. Since then, the number of cattle grows because the presence of oil palm land, it is very helpful in raising cattle (Interview with Abdurrahman, Seuneubok Village, District Nurussalam, July 18, 2016).

The explanations above illustrate that the integration of oil palm - cattle carried out by the farming community occurs naturally, without modern knowledge and technology. Oil palm land was chosen as cattle grazed on the basis of necessity, because of less land freely for grazing cattle, so that the utilization of palm tree such fronds and leaves to feed is not treated yet with modern technology. The cattle just eat weeds that grows wildly in the area of oil palm, and palm leaves on the tree. Moreover farmers prefer to look for grass or weeds in other areas to feed their cattle at night or planted grass in specific land areas for being cut to feed cattle daily.

These integration models differ from the integration models were conducted by the companies of oil palm that categorized into three models, namely intensive, extensive and as transportation, as stated by the Director General of Animal Husbandry and Animal Health Ministry of Agriculture, Iwantoro (2014) the company's goals of doing cattle-palm integration program are; (1) to obtain organic fertilizer, cattle raising is done intensively in cages. For example, the Oil Palm Research Center (PPKS) in Bukit Sentang; (2) The cattle enabled to eat weeds / grass growing in the oil palm plantation and given additional feed amplifier / concentrate and water. The integration cattle-palm performed extensively. The example is in PT. Sulung Ranch, Kota Waringin Barat, Central Kalimantan; and (3) Integration with the aim of utilizing the labor force of cattle to transport the oil palm for lack of labor in the oil palm plantation. It's conducted by PT Agrical in North Bengkulu.

In addition, the integration model also takes place through the cooperation of farmers with cattle raisers. The farmers do not have cattle and ranchers do not have oil palm, but they cooperate mutually beneficial to both parties. This type of integrations can be advantageous for both sides, because the cattle raisers do not have to think place to graze their cattle, while for oil palm farmers do not have to clean the weeds in the oil palm plantations (Interview with Jufri Alias Jabrik, Alue Siwah Serdang, Nurussalam sub-district, East Aceh district, June 3, 2016).

However, the integration of cattle with oil palm in East Aceh has not been conducted by the government in particular. Government department, such agriculture and estate, and livestock department work separately and less of coordination. The result is livestock aid cannot be integrated with the assistance of oil palm through the estate agency. Unless cattle aid given to farmers by chance. It was confirmed by farmers' statement in Alue Siwah, that they got five female cattle for ten people from government. Most of them keep it in the area of oil palm, but others do not so (Interview with Mr. Basaruddin, staff of the Ministry of Forestry and Plantation East Aceh, June 4, 2016)

### Conclusions

Cattle-oil palm integrated system in East Aceh conducted by farmers based on their own initiative, without a policy of government. This occurred naturally without knowledge and modern technologies. So that integration models do not have mutual advantage between cattle and oil palm, they perceive oil palm plantation is useful for grazing cattle, while dung of cattle is still useless for oil palm fertilizer. Only few of them have mutual advantage, but without technology treatment. Thus integration models are different from many concepts applied by companies outside East Aceh. Farmers need enlightenment from government or academicians to gain mutual advantage of cattle-oil palm integration model.

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