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Ibrahim Che Omar
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Preface

First of all, I would like to take this opportunity to thank the organizing committee of the Fourth International Seminar on Poverty Eradication 2013. It is certainly another great effort in organizing the Seminar which will be remembered by the participants. RENPER is a humble network which comprises of institutions who showed great commitment and interest on the regional and global issues of poverty. One of the challenges of the network is to have a constant contact between the members and thus, the seminar will be the only initiatives that will bring all the members together. In 2013, the seminar was a great success and this is evidenced with the publication of the Seminar proceedings with the papers coming not only from the member countries but also from other countries.

For Universiti Malaysia Kelantan, poverty is viewed as one of the important focus areas for research and management strategies. Although, Malaysia has successfully reduced the poverty level, however, eradication of poverty remains to be almost impossible. On the other hand, ones should not feel intimidated by the many challenges ahead because poverty is not just confined within the poor, but it is also the responsible of the rich including the academicians, who are responsible in resolving problem related to poverty reduction and/or eradication. Poverty will continue to be a global problem as the world's population increases. With the change in global climate, new disasters and catastrophes are affecting the lives of mankind. We have seen people in poor countries facing with the natural calamities and the numbers of climatic refugees are in the rise. Majority of these climatic refugees are poor. Apart from that, political instability has resulted in economic down turns, inflating the problems of poverty. It is therefore vital for

any agencies, government and non-governmental organizations, to consider participating in the concerted effort in poverty eradication. The government will not be able to provide all the needs of the poor but obviously, the government will need to provide the opportunities, knowledge, skills and tools for the poor to undertake activities which will improve their lifestyles and socio-economic status.

Since the publication of The Proceedings of the First Seminar in 2010 and now the publication of the Fourth Proceedings of the RENPER Seminar, there have been a significant effort by our academicians to be involved in the work related to poverty in the communities. In this Fourth proceeding, wide array of topics on poverty and the eradication strategies were highlighted, ranging from best practices in agriculture, skill development, education among the poor, social integration, economic enhancement, technology transfer and national intervention in poverty eradication. The proceeding provides valuable information on the vast possibilities in tackling the problems associated with poverty. Although, poverty and the poor are associated with lack of food, shelter and clothing, but the most important part of poverty is due to the lack of knowledge. Due to the low literacy rate among the poor, knowledge transfer becomes relatively unsuccessful. The prerequisite for knowledge transfer among the communities will cover self motivation and willingness to change. The poor must be willing and ready to change, mainly their lifestyles, and their economic status. The poor who are highly motivated will help to facilitate the intervention programmes within the community. However, if the poor are highly dependable on the government, they are normally not willing to work for a better future and poverty will remain unchanged. I believe the proceedings will provide another dimension and insights on poverty and it will also add to other voluminous literatures on poverty around the world. Regionally, the proceeding will certainly be one of the sources

of references on Asian poverty.

I am happy to inform that RENPER has actually achieved its objectives considering the constraints faced by the member countries. We also believe that there are still a lot of work needed to be done. However, through continuous support, co-operation and synergies, RENPER hopes to further strengthen the collaborative network in the future. Issues and topics on poverty may not be attractive to most academicians, but they must not forget that extreme poverty will tantamount to enormous destruction of the socio-economy of the country. As The Chairman of RENPER, I would like to take this opportunity to invite other institutions of higher learning and also non-governmental organisations to join the network of RENPER. The publication of the proceedings of the Fourth RENPER International Seminar marks another milestone for RENPER in enriching the knowledge on poverty. I would like to thank all the contributors in making the publication of the proceedings, a great success with the hope that it will benefits not only the academic fraternity but also other stakeholders, decision making agencies and the governments.

Thank you,

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CLOSED FARMING SYSTEM: AN ALTERNATIVE POVERTY ERADICATION IN KABUPATEN REJANG LEBONG, BENGKULU PROVINCE, INDONESIA

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Abstract

Bengkulu is classified as an under-developed province due to high poverty percentage in Indonesia. Rejang Lebong with its basis on agriculture is part of the province that shares the high number of poverty in Bengkulu. The poverty eradication in Rejang Lebong should be focused on the rural area in which 75% of poverty taken place. It should be developed an alternative approach to reduce the dependency of farmers on chemical fertilizers and pesticides, the main cost of agricultural input in an-organic farming system. The aim of project is to develop a closed farming system in which entirely input of agricultural production derived from the internal villages. It is therefore the combination between dairy farm and vegetable farm was introduced, including the establishment of composting technology. Results show that the production organic farming still faced obstacles particularly

due to the high degree of pest and diseases occurrence. Eventually, the production is obviously under the an-organic farming system, but as the organic vegetable products have been appreciated by consumers, the farmers still earned money due to high price and low input cost. Characteristics assessment of twenty sources genetic of sweet corn also came across an occurrence of leaves disease (*Helminthosporium turcicum*). The disease infestation hampers its optimal growth and production of all varieties. The program, therefore, should consistently convince the organic farmers by improving the technology in handling the plant pests and diseases.

Key words: *Rejang Lebong, poverty, compost, closed system farming*

Background

Data from Bengkulu Statistic Bureau Office shows that poverty degree of the Bengkulu province in 2013 of about 327.350 people (18.34% of the population). There is an increase of about 5.44% from the year of 2012. The data also indicates that most of the poverty has been found in the rural area, i.e. almost three times higher than poverty in the urban area. In Kabupaten Rejang Lebong, one of the 9 kabupaten in Bengkulu province, the poverty level is about 17.31% of the total population in this area (Anonym, 2013). Meanwhile, the economic in Kabupaten Rejang Lebong rely on an-organic agricultural system, particularly vegetable production that mostly concentrated in rural area. These facts pointed out that the Kabupaten Rejang Lebong should increase the capacity of the farmers to produce vegetables economically so that the poverty level could be alleviated.

Problems encountered by an-organic farmers are the scarcity and or expensive agricultural inputs and also has a negative impact

on health and environment (IFPRI, 2002; Lal, 2006; Las *et al.*, 2009). In addition, the successes in an-organic farming heavily depend on chemical fertilizers and pesticides (Welch and Graham, 1999). To solve these problems, therefore, farmers should be educated to acknowledge the ancient farming system that only relies on internal resources (Dirjen BPPHP, 2001). Pohlman and Sleper (1995) suggested seeds which is suitable to the area it should initiated by combining genetic resources which are available either in the area or from outside. There are three proposed activities which are considered able to eradicate the poverty level in Kabupaten Rejang Lebong i.e. by reducing the dependency on chemical inputs of agriculture, introducing vegetable seeds suitable to the specific high land (Rejang Lebong) climate, and improving the postharvest technology and marketing.

The objectives of the study were to obtain an efficient closed system farming to support an alleviation poverty program of vegetable farmers in Kabupaten Rejang Lebong, Bengkulu province of Indonesia.

Material and Method

The researchers of the University of Bengkulu in collaboration with the branch of Bank Central of Indonesia in Bengkulu, Lembaga Ilmu Pengetahuan Indonesia (LIPI), and the Directorate General of Higher Education of Indonesia developing sustainable agricultural project focused on organic farming system using input resources such as seeds, fertilizers (compost and manures) and organic pesticides from internal village, known as closed system farming. An area of 6500 m² was set as a pilot project in which 2000 m² was used as an animal farmhouse including an area for producing compost and manure, vermi-compost, and organic pesticides. The rest of the land was used for vegetable production.

Ten dairy cows were introduced from Balai Besar Pembibitan Ternak Unggul Sapi Perah Baturaden Purwokerto, Jawa Tengah of Indonesia. The dairy cows were brought into the farmers in order to maintain an optimum milk production. These technologies include sanitary of the animal house system, dairy cow health, and creating an alternative dairy cow feed. Meanwhile, zero waste technology of dairy milk production is established by composting raw material from litter or waste from dairy cows forages and cows manure mixed with effective microorganisms, following with established procedures of compost production technology. The cows urine was also processed using aerated technology to become liquid fertilizer and pesticides. Furthermore, vermi-compost was introduced to the farmers by utilizing soil worm (*Lumbricus rubilus*) to chomp the manures produced by dairy cows. Vermi-compost is known as a high quality of compost composing rich variety of mineral.

Varieties of vegetable such as carrot, beans, tomatoes, hot chili, cucumber, and sweet corn were cultivated using closed farming system i.e. without using input from outside of the villages. Farmers were showed to practice growing the vegetables without using external input especially chemical fertilizers and pesticides.

Result and Discussion

The project was initiated in 2010 by establishing dairy milk farm consisted of five (5) female dairy cows and in 2012 was introduced another five (5) female dairy cows. By August 2013, the cow population is seventeen (17), including two newborn and five of 1 year old offspring. The dairy farming system produces approximately 300 kg of wet manure per day (87.5% is water) and must be managed properly as a raw material of compost. Within one month the production

of manure compost is about 1.14 ton/month. Commonly the vegetable farmers applying 15 ton manure compost/ha, therefore, the developed system can support organic farming approximately 750 m² per month. The compost using litter of dairy cow forages also has a potential source of organic fertilizer. It only takes less than 6 weeks of composting for the product to be ready for application. At present the farm is able to produce compost of about 250 kg/month. In addition, the production of vermin compost per month was about 100 kg, and this organic fertilizer has been valued in the market.

To introduce the closed farming system to the farmers, a group of 10 vegetable farmers were chosen as pilot project and have been for two years conducting semi-organic farming cultivation. Each farmer was arranged to cultivate different commodity to reduce the high risk of over-supply product. The results showed that all of the vegetable production in organic farming system in average was still under the an-organic farming system (Table 1).

Table 1. Average vegetable production of organic and an-organic farming system in Kabupaten Rejang Lebong of Indonesia

Commodity	Organic farming (ton/ha)	Anorganic farming (ton/ha)
CARROT	10	14
CUCUMBER	10	20
SWEET CORN	3.5	8
TOMATOES	3	7
HOT CHILI	6	10
BEAN	1	4

It is found in the field that the organic farming facing various obstacles due to high incidence of weeds, pests and diseases in the field. The biological pesticides were not able to control the infestation unless spray more regularly. This was of course brought about the decrease in the production of the vegetables. However, with the high price of organic product and low input cost therefore farmers still earn the money.

The techniques on organic farming still need to be improved to boost the production per hectare. Farmers will obtain more income if the production is close to the an-organic system due to low cost input and high price of the product.

The next step of the project is to provide vegetable seeds which are suitable to the Rejang Lebong environment. At present farmers produce their own seeds or buying from the agricultural shop, and this will not be able to boost the production. Since 2013 the research team conducting breeding program in sweet corn. Twenty (20) varieties of sweet corn were initially evaluated its characteristics in Rejang Lebong, and also each of them will be selected for another 6 years to obtain hybrids suitable for Rejang Lebong area. At the same time breeding program is also carried on some potential and high value vegetables. Hopefully within 6 to 7 years to come, vegetable farmers will have their own high quality seed to guaranty the high production of vegetable using organic farming system.

Twenty genetic sources of sweet corn were evaluated its growth and yield characteristics in an organic farming system (Table 2). The area has been used for organic farming since 2009, but its surrounded area still carried out an-organic farming. The result show that more than 75% of the population were infested by "hawar daun" (*Helminthosporium*

turcicum) introduced by neighboring sweet corn field. In result, the growth of the plants were stunted, most of the leaves showed a high degree of lesion distributed throughout the leaves surface. Control measures have been taken using organic pesticide but only reduce the disease. There were at least 5 different genetic plants adapted to the area of Rejang Lebong (G2, G6, G14, G15, and G20). These results pointed out that organic farming system requires area that should be far from sources of pest and diseases. Effort still need to be done by finding tolerant varieties and better quality bio-pesticides, also inviting much more number of farmers to join the organic farming.

Table 2. Yield characteristics of twenty genetically potential sweet corn cultivated in Rejang Lebong of Indonesia

Genetic Source	Number of cob	Cob weight (g)
G1	1.5	211.1
G2	1.2	307.2
G3	1.4	278.2
G4	1.6	246.6
G5	1.6	286.9
G6	1.8	355.9
G7	1.7	240.5
G8	1.3	167.2
G9	1.3	176.3
G10	1.3	224.0
G11	1.6	239.3
G12	1.5	219.3
G13	1.2	201.7
G14	1.2	304.4
G15	2.0	309.1
G16	1.5	263.0
G17	1.0	233.9
G18	1.5	287.9
G19	1.3	285.3
G20	1.9	307.7

Conclusion

1. The development of closed farming system provides an alternative for poverty eradication in Kabupaten Rejang Lebong.
2. The technique of vegetable production by using organic farming still needs to be improved.

References

- Anonym. (2013). Berita Resmi Statistik. BPS Provinsi Bengkulu. 34/07/17/Th.VII. 1 Juli 2013.
- Dirjen BPPHP. 2001. Go Organic 2010 Menuju Pertanian Organik 2010. Dirjen BPPHP Departemen Pertanian.
- IFPRI. (2002). Green revolution: Curse or Blessing? International Food Policy Research Institute. www.ifpri.org.
- Lal, R. (2009). Technology without wisdom. In. Sustainable Agriculture Reviews Vol. 1: Organic Farming, Pest Control and Remediation of Soil Pollutants. Eric Lichtfouse (Editor), p 11-14. Springer, London.
- Las, I., K. Subagyono, dan A.P. Setiyanto. (2006). Isu dan pengelolaan lingkungan dalam revitalisasi pertanian. Jurnal Litbang Pertanian 25 : 106-114.
- Poehlman, J.M. and D.A. Sleper. (1995). Breeding Field Crops. 4th Ed. Iowa State University Press, Iowa.
- Welch, R.M. and R.D. Graham. (1999). A new paradigm for world agriculture: Meeting human needs Productive, sustainable, nutritious. Field Crops Res. 60: 1-10

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