



INTRODUCING CLOSED AGRICULTURE SYSTEM IN AIR DUKU VILLAGE, REJANG LEBONG, BENGKULU

Zainal Mukhtar, Nanik Setyowati and Sigit Sudjatmiko
Agriculture Faculty, University of Bengkulu, Indonesia

Introduction

Farmers in Rejang Lebong Regency historically have been dependent on pesticide and inorganic fertilizer for their vegetable crop production. This farming system has caused negative affects on environment as well as farmers health. Mukhtar et al. (2011) reported that farmers in Air Duku Village applied excessive pesticide and overdosed inorganic fertilizer for vegetable production. Application of pesticides in the field was rarely following the common regulation. Clinical test confirmed that heart and kidney deterioration were encountered on some farmers.

In recent year, awareness of healthy food has been increasing very rapidly. This is related to awareness of good health as well as prevention of environmental hazard due to application of excessive pesticides and inorganic fertilizer.

Closed agriculture system is one of alternatives to address the two recent phenomena. In this system, we develop organic farming with utilization of local resources, without external input.

Pilot project of the system is located in Air Duku Vilage, Rejang Lebong. We develop integration of 3 activi-

RESULT

Two year experience of organic farming shows that the need of compost could be fulfilled from the production of composting of milking cows and vegetable wastes. Waste of 5 milking cows is sufficient to fertilize about 1 ha of vegetable land. The yield of vegetable fertilizing by compost is lower than that of inorganic fertilizer; however, the product is free of pesticides and inorganic fertilizer, so the price of the vegetable was higher.

On the average, milk production of each milking cow is 13-15 liter per day. This production is relatively lower than that of the same business in Java. However, it is expected that the production will increase after the second birth.

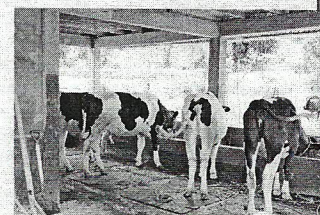
Other advantage of this system is that we are able to produce biogas for cooking or other energy need, so it is very fruitful for farmer in Air Duku Village.



Closed Agriculture System

SUMMARY

Two year experience of closed agriculture system shows that this system is very promising to be applied.



Milking cow



Organic Farming

Reference

Mukhtar, Z., S. Sudjatmiko, B. Toha, and M. Asteria. 2011. Farmers are sacrificing their health for production of vegetables. International Conference on Sustainable Agriculture and Food