ABSTRACT

THE IMPACT OF ORGANIC RICE CULTIVATION USING SRI SYSTEM (System of Rice Intensification) ON THE SUSTAINABILITY OF THE ORGANIC-C SUBSTANCE OF SOIL AND THE FARMERS' INCOME IN GUNUNG SUGIH DISTRICT, CENTRAL LAMPUNG

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The exploitation of soil which is done intensively causes to soil infertility and soil components. The fact that more people use chemical substance instead of organic ones to gain high crops decreased the organic substance of soil either in quantity or quality. To solve such problem, there should be a reorientation and revitalization of a long term program for crops increase; this includes the development of land resources, irrigation, cultivation technology, and also structural supports. There is one way to increase the productivity without ignoring the sustainability by the application of organic rice cultivation using SRI method (System of Rice Intensification). In the sake of sustainable agriculture development, this research is aimed at analyzing: (1) the sustainability of C substance of soil after the treatment of SRI method, (2) the impact of SRI method on the increase of crops, (3) the impact of SRI method on the increase of income of the farmers.

This research was conducted in Buyut Ilir Village, District of Gunung Sugih, Central Lampung. The location was chosen with purposive method. Because the population was small, thus, a census was applied towards 10 respondents of farmers who applied SRI method; the control group was taken from 10 respondents of farmers who applied conventional way in the same location. Then, zig zag method was used to take samples of soil from both rice fields.

The analysis on agronomical variables was done statistically using Microsoft Exell and SPSS® version 16; the result t was assumed light different on level 5 %. Meanwhile the economy aspect was calculated with an analysis on the farming itself.

The result showed that (1) the rice organic cultivation with SRI method in Gunung Sugih District, Central Lampung could maintain the sustainability of organic-C substance (2) the application of rice organic cultivation with SRI method in Gunung Sugih District, Central Lampung did not increase the land
productivity yet because the composition of organic fertilizer was under the optimum standard which was about 3.77 ton per hectare, (3) although the productivity was low, the method of SRI, in fact gave higher profits for farmers because they used the minimum production equipments and sold the organin cops with higher price. R/C ratio of organic farmers with SRI method toward cash cost was 6.79 higher than conventional farmers which was 3.55.

Key words: Organic-C sustainability, SRI method, income of rice farming