ABSTRACT

RULI BASUNI. Assessment On The Crop Livestock System In The Paddy Field: A Case Study in the Cianjur Regency, West Java. Under the direction of MULADNO, CECEP KUSMANA, and SURYAHADI

The crop livestock system (CLS) is an effort to increase paddy production that be integrated with livestock. The integration pattern was the utilization of plant straws as feed and manure for fertilizer. The technology innovations introduced was paddy primary seeds, balanced fertilization, group stall management, organic fertilizer processing, and paddy straw fermentation. The purpose of the assessment was to find out the role of livestock on the farmer income through the integration of crops and livestock system based on the technology innovations. The assessment involved livestock and 5 ha paddy planting area. The farmer consist of 2 groups i.e.: cooperator group (integrated system), and control (non integrated). Meanwhile, this assessment was used 20 livestock/group of respondent. The assessment results showed that paddy yield was 5.36 tons/ha, an increase of 10.29% compared to those yielded by other farmers. The use of inorganic fertilizer decreased to 100 kg/ha (N 57.14%), SP-35 50%, KCl 50%. The average of daily weight gain was 790 g/cattle and organic fertilizer 10.02%. The C/N ratio of composted feces was 19.03%. The average organic fertilizer yielded was 4 kg/cattle daily and the rice straw yielded was 7.26 tons/ha/season. The income of farmers with the integrated farming system was Rp. 9,086,867 for 1 ha land and 2 beef cattle with R/C ratio of 1.56. The result of the analysis becomes one of the resources to provide judgments on every sub-dimension in relation to the sustainable CLS farming business within existing condition. Based on the discourse resulted from stakeholder and expert discussions, there are 33 sub-dimensions within four farming business dimensions of CLS in Cianjur. Those are dimensions of ecology, economy, socio culture, and technology. The status of CLS sustainability in multidimension perspective throughout Cianjur Regency shows sustainability index score of 46.34 within 0 – 100 sustainability scales. The score is categorized as less sustainable. Socio-culture score is 52.37, economics score is 52.38, ecology score is 49.35, and technology dimension score is 31.26. There are 7 key factors as the important factors for stipulating policy and strategy of CLS development in the future – comprises to three keys which have high influence but low dependent, such as (1) farmer group/the Accosiation, (2) Training and supervision frequency, (3) woolf supply; and four variables which have high influence and dependet as well, like (1) livestock nursing system, (2) Financial support, (3) Government supports, and (4) inter-sectoral cooperation. An optimistic-moderate scenario means the condition of CLS farming business in the future is predicted through the existing assets and resources. This also aims to increase the prosperity level of the farmer and to contribute to the local economics movement. National massive movement and policy are hoped to be able to push a sustainable agriculture movement through the implementation of CLS pattern in specific location with some considering factors to be taken.

Keys words :: crop-livestock system (CLS), paddy, sustainability.