

ABSTRACT

The extension program on the production and application of organic fertilizer is one of the efforts to increase the use of organic materials in support of paddy field rice cultivation. However, the adoption of organic fertilizer by farmers in Gampong Cot Trieng, Muara Satu District, Lhokseumawe City, is still not optimal due to constraints in the production process, application, and sustainability of its use. This study aims to evaluate the implementation of the extension program on the production and application of organic fertilizer and to identify factors hindering the adoption of organic fertilizer in paddy field rice cultivation. The study was conducted in Gampong Cot Trieng, Muara Satu Subdistrict, Lhokseumawe City, using primary and secondary data. The study site was selected through purposive sampling, while sampling was conducted using a census method with a total of 38 paddy farmers and one agricultural extension worker as a key informant. The data analysis methods used were qualitative descriptive analysis and the *Fishbone* Diagram. The results showed that the extension program was implemented through the stages of planning, socialization, implementation, application, and evaluation. The extension activities provided farmers with knowledge regarding the benefits of organic fertilizer, the use of EM4, production materials, and the fermentation process. However, the application of organic fertilizer remains suboptimal due to factors related to human behavior, methods, materials, machinery/equipment, and the environment. The main constraints identified include the habit of using chemical fertilizers, limited extension support, difficulties in producing organic fertilizer, a lack of supporting facilities, and environmental conditions that affect the application of organic fertilizer. Therefore, it is necessary to increase extension support, strengthen cooperation among farmer groups, and provide supporting facilities so that the application of organic fertilizer can proceed optimally and sustainably in rice cultivation activities in Gampong Cot Trieng.

Keywords: Program evaluation, extension, organic fertilizer, paddy rice, *Fishbone*.