

## ABSTRACT

Rice is Indonesian staple food. Indonesian population has grown over two hundred million people, rank number four in the world. The country has to supply more food to the growing population. To increase rice productivity, farmers need to be introduced a new crop cultivation method which is called SRI (System of Rice Intensification). Research objectives of this study are to identify the affecting factors of farmers who discontinue SRI method and to suggest strategies for overcoming SRI adoption problems. Field survey with a semi-structured questionnaire, key informant interview, and focus group discussion was conducted. This study used Analytic Hierarchy Process (AHP) to analyze experts' judgment regarding SRI practices. The survey was conducted in two villages in Pagelaran, Malang. It was found that SRI farmers were doing 10-12 days nursery, planting 1-2 seedlings per hill, using 25-28 cm plant spacing, but water management was still following conventional method. They were encouraged to use an organic fertilizer with the ratio of organic and chemical fertilizer is 3:2. Farmers were aware of the advantage of SRI method but unwilling to adopt SRI method. Inconvenient practices, low cost-benefit, and unavailability of resources are identified as factors hindered SRI adoption. AHP is considered to give better suggestions to farmers. Experts are asked to score SRI practices according to its priorities. Results will be used to give farmers suggestion about which SRI practices should be adopted it first. AHP is a theory of measurement through pairwise comparisons and relies on the judgment of experts to derive priority scales (Saaty, T.L, 2008). As a result, experts score soil organic enhancement as the most important factor in successfully adopting SRI method. Intermittent irrigation and planting of young seedling is in second and third place but the difference is just about 0.1 %. Plant single seedling per hill is in fourth priorities. Sufficient spacing and weeds control are in fifth and last place with each weights less than 10%. Soil organic, intermittent irrigation, and frequent weeding are the most affecting factors in downgrade adoption. Based on AHP results, farmers should improve their knowledge in soil as well as intermittent irrigation performance and less concerned about weeds. Also, in order to increase the adoption rate of SRI method, farmers should be given a proper training to raise their understanding of sustainable paddy planting and researcher should guide appropriate SRI method on site.

*Keywords: adoption, AHP, rice, SRI, sustainable paddy planting*