

SUMMARY

VIORYZA BALGIES PANGESTIKA. 105040101111095. Analysis of Technical Efficiency of Farmer's Income Level and Rice Farming SRI and non-SRI method in Sidowayah Village, District Beji, Pasuruan. Under the guidance of Asmara Rosihan SE., MP. and Fahriyah, SP., M.Si.

One method of increasing productivity of rice paddy adalah usahatani interesting to study methods of SRI (*System Of Rice Intencification*). SRI trials in Indonesia was first implemented by the Institute for Agricultural Research and Development in West Java Sukamandi the dry season in 1999 with the results of 6.2 tons / ha and in the rainy season 1999/2000 the average paddy yield of 8.2 tonnes / ha (Uphoff 2002 in Handono, 2013). According to Mariani, Mary and Husinsyah (2011), in contrast to the conventional pattern which usually focus on the use of high external *inputs*, ie water, nutrients, and pesticides. The use of external *inputs* are high as it would have negative impacts on plants and the environment. SRI method is seen as one answer to the problems and challenges in efforts to increase the productivity of rice plants that are environmentally friendly.

Activities to increase rice production by farmers in the village Sidowayah is to adopt SRI method under the guidance of PT HM Sampoerna Tbk. Recognition program SRI to farmers in the village Sidowayah conducted in 2012 with results obtained expressed bahwaterjadi increase in production at an average initial production of paddy in the village of Sidowayah of 6-7 tons / ha to 8-10 tonnes / ha. Increased produksitersebut not want to make all farmers applying SRI methods for further production. According to Richardson (2010) a major challenge for developers of SRI is difficult to convince the farmers that the methods they have used for years (the conventional method) does not fully improve high yields.

After the expiry of the introduction of SRI methods, many farmers are returning to conventional methods for their agricultural kegiatan. Judging from the increased production should be the preferred method may SRI farmers to undertake farming activities, but it does not apply to rice farmers in the village Sidowayah. Of the 20 farmers sampled SRI trials, gradually decreased until leaving about 8 farmers who survive. One reason is that farmers tend to be difficult to accept the new technology. Therefore, this study was conducted to determine the level of technical efficiency of the method compared with the methods of SRI and non-SRI also be seen from the level of farmers' income and non-SRI SRI method. In addition, this study also conducted to determine the reasons for farmers who do not want to use the SRI method back to farming activities.

The purpose of this study are: 1) analyze factors that influence the level of production of SRI method of rice farming and non SRIdi Sidowayah Village, District Beji, Pasuruan, 2) analyzing the level of technical efficiency of rice farming SRI and non-SRI method in the Village Sidowayah Sub Beji, Pasuruan, 3) Analyze the income level of farmers users SRI method as compared to non-SRI farmers in the village Sidowayah, District Beji, Pasuruan, 4) Knowing the reason farmers in the village Sidowayah, District Beji, Pasuruan not apply kembalimetode SRI in farming.

The factors of production are used in the SRI method of rice farming in the study sites are seed, fertilizer urea, SP36, and labor. Of the four variables were significant in the production of SRI method of rice farming is the seed, fertilizer urea and SP36. This shows that with the addition of seed, fertilizer urea and SP36 will affect the rice production greater than other factors of production. Meanwhile, urea production factors and SP36 has a positive relationship which means an increase of the production factors can increase rice production. Factors seed production has a negative correlation means that the addition of seeds which will lower the SRI method of rice production. Furthermore, the factors that influence on the non-SRI method of rice production is urea fertilizer and labor, while the seeds and SP36 had no significant effect on rice production. Urea is positive so that the addition of urea to increase production but labor is negative, which means an increase in the use of labor will decrease the production of non-SRI method of paddy.

Efficiency measurement using *Data Envelopment Analysis* (DEA) suggests that SRI method of rice farming is technically more efficient than conventional methods. This is indicated by the results obtained from 20 respondents where SRI farmers, 80% had reached technically efficient. While 35 respondents from non-SRI farmers, only 46% of farmers who achieve efficient.

Different test results show the average t_i value is smaller than t_{table} is 0.487 $1.684 <$ so H_0 is rejected and H_1 is accepted at the 95% confidence interval, which means that the average farm income of rice farmers and non-SRI SRI were not significantly different.

There are four main reasons farmers do not apply anymore SRI methods in farming, namely: 1) Farmers who still find it difficult to implement new technologies; 2) Age SRI planting method were deemed too young by farmers; 3) SRI method requires more control than conventional treatments; and 4) The cost of production is higher than conventional methods.

Keywords: Technical Efficiency, DEA, Stochastic Frontier, Income