

Post-Green Revolution Diffusion Process of Low Input Agricultural Technology in Jawa, Indonesia: Social Network Analysis of Organic SRI (System of Rice Intensification) Diffusion

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Summary

After achieving self-sustainability in rice, post-green revolution Indonesia now aspires to achieve sustainable enhancement in rice production through the diffusion of low-input agricultural technology or organic farming, which can reduce the burden on the environment, farmers' operations, and public finance for subsidize chemical fertilizers. However, the diffusion of the typical low-input rice cultivating technology in Indonesia called the "organic System of Rice Intensification (SRI)" is slow. This study employs social network analysis for organic SRI diffusion in a community that is the first organic rice exporter in Indonesia, to examine the effects of low-input agricultural technology diffusion on farmers' operations, social networks among farmers, and local agricultural labor employment institutions.

The results are as follows. (1) The income of farmers who introduced organic SRI is higher than those who did not. (2) The diffusion of organic SRI activated the farmers' social networks through mutual learning of technology. (3) Farmers who have not introduced organic SRI mainly maintain the local employment institutions, which distribute income to small-sized farmers and landless individuals.

The local rice branding system of the case community, using low-input agricultural technologies such as organic SRI, has increased farmer income and activated the local socio-economy; this is now applicable to other communities as a model case. At once, the diffusion of low-input agricultural technology has caused a severe decline in the income distribution function of the traditional employment system. For further diffusion of low-input agricultural technology, it is necessary to adjust social institutions to correct the socio-economic disparity between farmers that can introduce organic SRI and farmers that cannot.

Key words: Post green revolution, Indonesia, Organic SRI, Institutions, Social network analysis