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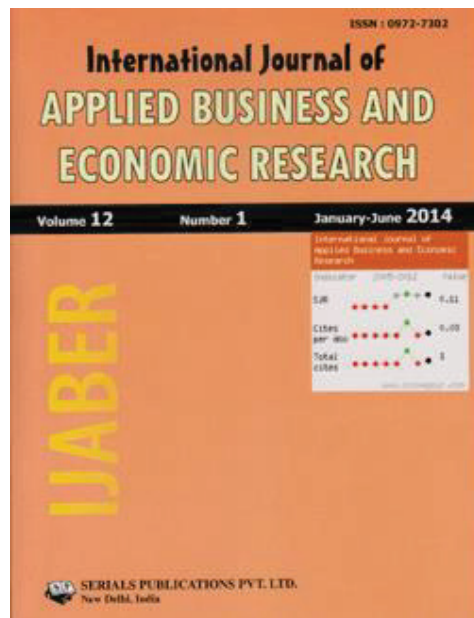


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## ADOPTION OF TECHNOLOGY AND ECONOMIC EFFICIENCY OF THE SMALL-HOLDER MANGO FARMERS IN INDONESIA

Lies Sulistyowati<sup>1</sup>, Ronnie S. Natawidjaja<sup>2</sup> and Bobby Rahmat<sup>3</sup>

**Abstract:** *The demand of mangoes for both domestic and export markets have been continuously increased in the last two decades. Indonesia as the sixth mango producer in the world is just contributed to a very small proportion (0.07 per cent). This was happened due to only small number of mango farmers who are applying cultivation technology, so the productivity and the quality of mangoes produced are very low. On the other hand, number of imported mangoes tend to steadily increase.*

*This paper is intended to explain the response of mango farmers to mangoes market demand related to factors affected on the application of mango cultivation technology, as well as its economic efficiency respectively. This study was conducted in East and West Java as two main mango producer provinces in Indonesia, through an explanatory survey. The data was analyzed using Logit model and stochastic frontier analysis method in the Cobb-Douglass production function.*

*This research indicated that the percentage of Indonesian farmers applying this technology is still very low. The decision of mango farmers in applying off-season technology were affected by the status of mango cultivation, number of trees, accessibility upon information, market and capital, and level of education and number of followed training. Mangoes production is significantly affected by numbers of tree, application of off-season technology, human resources allocation, the use of pesticide and pest control tools. Technical efficiency, allocation efficiency dan economic efficiency of Indonesian mangoes farmers are respectively: 70,37%, 15,05%, and 11,19%. West Java has a lower efficiency rate compared to East Java due to lack of experience and access to funding. The major contributing factors for technical in-efficiency were the experience of the farmer, credit and information accessibility.*

**Keywords:** *Economic-efficiency, Indonesia, Mango, Smallholder farmers, Technology-adoption.*

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