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Determinants of organic fertilisers utilisation among smallholder coffee farmers in Vietnam

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Abstract

The Vietnamese coffee industry has achieved a high yield due to the excessive use of synthetic fertilisers in farming systems. It, however, had a detrimental effect on the environment. Since the industry is a crucial player in the country's socioeconomic development, it must be maintained sustainably. This study aims to increase organic fertiliser adoption among Vietnamese coffee growers by identifying the factors influencing the selection of organic fertilisers. Together, it addressed a connection between the use of organic fertiliser and the participation of farmers in the credit program. A bivariate model regression was used to estimate this linkage, relying on the data set using multistage sampling techniques. 139 Robusta coffee farmers were gathered from major coffee-growing areas in Dak Lak province in 2022, namely Buon Ky, Ea Tu, Ea Kao, Hoa Thang, and Ea Tieu. This data set also considered the mixture of minority and majority groups to determine the differences in their preferences for organic fertilisers and credit. Results indicate that variables of coffee farming experience, farmer membership, soil quality perception, and intercropping have a positive and significant effect; however, age and coffee farm size reduce organic fertiliser adoption. Other findings reveal that family and coffee farm sizes positively influence credit participation. Coffee farmers who adopt organic fertilisers and perceive better soil improvement were found to need less credit than those who did not perceive the benefit of using organic fertiliser. The study recommended that policymakers should focus more on a group of only chemical-fertiliser farmers and promote cooperatives and companies using organic fertiliser.

Keywords: Credit, farmer membership, organic fertiliser, robusta coffee, Vietnam