ABSTRACT

Majority of the households in Mali depend on rain-fed agriculture for their food production. Overreliance on rain-fed agriculture limit limits the production output due to unreliable rainfall in the country. To mitigate this, the government has invested in rehabilitation of irrigation schemes. Through appropriate irrigation technologies and improved agronomic management practices, agricultural productivity will be increased. The objective of this study was to determine the technical efficiency of small scale vegetables production under different irrigation systems. This study was guided by the production theory. Primary data was collected from 273 farmers selected proportionately from four wards (Fanafiecoura and Tieman, in Koulikoro region and Mopti and Dialango, in Mopti region) using face-to-face interviews. Secondary data from literature reviews was also used. Cobb-Douglas stochastic frontier production regression model was used in the analysis. Stata software was used for analysis. This study found that with respect to the production of potatoes, shallots and tomatoes, technical efficiency scores were highest in drip irrigation, followed by sprinkling irrigation and lowest in Californian irrigation system. This study recommends that drip, sprinkling Californian irrigation systems should be promoted since they presents a good opportunity for superior technical efficiency in vegetable production.